

\LaTeX 2 $_{\epsilon}$ Classes for the Journal of Machine Learning Research

Nicola L. C. Talbot

<http://www.dickimaw-books.com/>

2014-09-29 (version 1.19)

Contents

1	Introduction	4
1.1	Required Packages	5
2	Guidelines for Article Authors	6
2.1	Title Information	6
2.2	Font Changing Commands	9
2.3	Structure	10
2.4	Citations and Bibliography	11
2.5	Figures and Tables	11
2.5.1	Sub-Figures and Sub-Tables	13
2.6	Algorithms	14
2.7	Description Lists	15
2.8	Theorems, Lemmas etc	15
2.9	Cross-Referencing	17
2.10	Mathematics	19
2.11	Color vs Grayscale	20
2.12	Where To Go For Help	21
3	Guidelines for Production Editors	23
3.1	jmlrbook Class Options	23
3.2	The Preamble	24
3.3	Main Book Commands	25
3.3.1	Two Column Articles in a One Column Book	29
3.3.2	Cross-Referencing	29
3.4	Altering the Layout of the Main Title Page	30
3.5	Potential Pitfalls	31
3.6	Creating the Book Using <code>makejmlrbook</code>	33
4	The Code	35
4.1	jmlr.cls Code	35
4.1.1	Sections	39
4.1.2	Footnotes	40
4.1.3	Article abstract	40
4.1.4	Keywords	40
4.1.5	Title Page Information	41
4.1.6	Pagestyles	48
4.1.7	Miscellany	51

4.1.8	Proofs and Theorems	57
4.1.9	Compatibility with <code>combine.cls</code>	65
4.2	<code>jmlrbook.cls</code> Code	73
	Index	105
	Index	105

1 Introduction

The `jmlr` class is for articles that need to be formatted according to the Journal of Machine Learning Research style. This class is based on the `jmlr2e` and `jmlrwcp2e` packages but has been adapted to enable it to work better with the `combine` class to collate the articles into a book. Section 2 describes how to use the `jmlr` class.

The `jmlrbook` class is for combining JMLR articles into a book. This class uses `combine` and `hyperref`, which are troublesome enough on their own but together are quite fragile. The `jmlrbook` class redefines some internals to get `combine` and `hyperref` to work together but some packages (e.g. `subfig` and `pdfpages`) are likely to mess everything up and cause errors. This is why the guidelines to authors are fairly stringent and why the `jmlr` class will give an error message if certain packages are loaded.¹ The `jmlrbook` class works best with PDF \LaTeX so authors should ensure that their articles can compile with PDF \LaTeX . Section 3 describes how to use the `jmlrbook` class.

Note that the `jmlr` (and therefore `jmlrbook`) class automatically loads the `hyperref` package, but some packages need to be loaded before `hyperref`.

Anything that needs to be done before `hyperref` is loaded can be specified by defining the command

`\jmlrprehyperref`

`\jmlrprehyperref`

before the class is loaded. For example, to load the packages `foo` and `bar` before `hyperref`, you can do:

```
\newcommand{\jmlrprehyperref}{\usepackage{foo,bar}}
\documentclass{jmlr}
```

There is a Java application called `makejmlrbookgui` that can compile all the individual papers from the book and generate the accompanying HTML files for the JMLR proceedings page. It can also create a grey nonhyperlinked PDF/X compliant print version of the book. The application can be downloaded from <http://www.dickimaw-books.com/apps/makejmlrbookgui/> where there is also a [troubleshooting section](#).

¹Currently `jmlr` will check if `subfig`, `pdfpages`, `geometry`, `psfig`, `epsfig`, `theorem`, `tabularx`, `amsthm` and `ntheorem` are loaded and will throw an error. If other packages are found to be a problem, they will be added to the list.

There is also a Perl script called `makejmlrbook`, which is distributed with the `jmlr` and `jmlrbook` bundle, however it has been superseded by `makejmlrbookgui`. For those who still want to use it, `makejmlrbook` is described in Section 3.6.

1.1 Required Packages

The `jmlr` class is based on the `article` class and loads the following packages: `amsmath`, `amssymb`, `natbib`, `url`, `graphicx` and `algorithm2e`, `hyperref`, `nameref`, `xcolor` and `xkeyval`. Note that unlike the `jmlr2e` and `jmlrwcp2e` packages, this class file does not load the obsolete `epsfig` package.

The `jmlrbook` class additionally loads the `combine` class and the following packages: `combnat`, `setspace` and `fink`.

The `makejmlrbookgui` application requires Java (at least JRE 7), \TeX , \TeX4HT and Ghostscript. The `makejmlrbook` script requires Perl, \TeX and \TeX4ht .

2 Guidelines for Article Authors

Article authors should use the `jmlr` class. This class comes with example files `jmlr-sample.tex` and `jmlrwcp-sample.tex`, which can be used as templates.

The following class options are available:

nowcp The article is for the Journal of Machine Learning Research (default).

wcp The article is for JMLR Workshop and Conference Proceedings.

twocolumn Use two-column style.

onecolumn Use one-column style (default).

color Color version (see Section 2.11).

gray Grayscale version (see Section 2.11).

tablecaption=top in a table environment, `\floatconts` puts the caption at the top.

tablecaption=bottom in a table environment, `\floatconts` puts the caption at the bottom.

2.1 Title Information

The `jmlr` class uses different syntax from `jmlr2e` and `jmlrwcp2e` to specify the title information. In particular, it doesn't define `\jmlrheading` and `\ShortHeading`. Instead, the following commands should be used:

`\jmlrvolume`

`\jmlrvolume{<number>}`

This specifies the volume number. For example:

`\jmlrvolume{2}`

`\jmlryear`

`\jmlryear{<year>}`

This specifies the year. For example:

`\jmlryear{2010}`

<code>\jmlrsubmitted</code>	<code>\jmlrsubmitted{<date>}</code>
This specifies the submission date.	
<code>\jmlrpublished</code>	<code>\jmlrpublished{<date>}</code>
This specifies the publication date.	
<code>\jmlrworkshop</code>	<code>\jmlrworkshop{<title>}</code>
This specifies the workshop title (for use with the wcp class option). The title information is specified using the commands described below. These commands should typically go in the preamble. As with most class files, The title itself is produced using	
<code>\maketitle</code>	<code>\maketitle</code>
This command should go after <code>\begin{document}</code> . For example: <code>\begin{document}</code> <code>\maketitle</code> Before <code>\maketitle</code> , you must specify the title information using the following commands:	
<code>\title</code>	<code>\title[<short title>]{<title>}</code>
This specifies the article's title. A short title for the page header can be supplied via the optional argument <i><short title></i> . If you want to force a line break in the title, use	
<code>\titlebreak</code>	<code>\titlebreak</code>
instead of <code>\newline</code> or <code>\\</code> as this will ensure that the line break doesn't also end up in the table of contents or bookmarks when the article is included in a book. If there is content within the title that should not appear in the page headings or table of contents (for example, a footnote) use	
<code>\titletag</code>	<code>\titletag{<title only stuff>}</code>
For example: <code>\title{An Interesting Paper\titlebreak</code> <code>With a Line Break\titletag{\thanks{and an</code> <code>acknowledgement}}}</code>	
<code>\editor</code>	<code>\editor{<name>}</code>

This specifies the editor's name. If there is more than one editor, use:

`\editors` `\editors{<names>}`

`\author` `\author{<author specs>}`

This specifies the author. The specifications *<author specs>* are a bit different to jmlr2e and jmlrwcp2e. Use

`\Name` `\Name [<abbreviated name>] { <author's name> }`

to specify the author's name. Note that if the surname contains a space it must be grouped (enclosed in braces {}). Similarly if the initial letter of each fore-name is a diacritic it must be grouped. If the abbreviation of the name doesn't get parsed properly you can override the default using the optional argument. (See below for examples.)

If there is any content within *<author's name>* that shouldn't get copied to the header, footer or table of contents, it should be enclosed within the argument of

`\nametag` `\nametag{<title only stuff>}`

For example:

```
\Name{Ann Other\nametag{\thanks{formerly with some other
institute}}}
```

`\Email` `\Email{<author's email>}`

This specifies the author's email address. It should only be used within the argument to `\author`.

`\and` `\and`

This should be used to separate two authors with the same address.

`\AND` `\AND`

This should be used to separate authors with different addresses.

`\\` `\\`

This should be used before an author's address or between authors with the same address where there are more than two authors.

`\addr`

`\addr`

This should be used at the start of the address.

Example 1 Two authors with the same address:

```
\author{\Name{Jane Doe} \Email{abc@sample.com}\and
\Name{John {Basey Fisher}} \Email{xyz@sample.com}}\
\addr Address}
```

In this example, the second author has a space in his surname so the surname needs to be grouped.

Example 2 Three authors with the same address:

```
\author{\Name{Fred Arnold {de la Cour}} \Email{an1@sample.com}}\
\Name{Jack Jones} \Email{an3@sample.com}}\
\Name{{\'}E}louise {\'}E}abhla Finchley} \Email{an2@sample.com}}\
\addr Address}
```

In this example, the third author has an accent on her forename initials so grouping is required.

Example 3 Authors with a different address:

```
\author{\Name{John Smith} \Email{abc@sample.com}}\
\addr Address 1
\AND
\Name{May Brown} \Email{xyz@sample.com}}\
\addr Address 2
}
```

Example 4 The author is actually a company so there's no first name and surname:

```
\author{\Name[Some Company, Ltd]{Some Company, Ltd}\Email{xyz:some.com}}\
\addr Address
}
```

2.2 Font Changing Commands

Use the $\text{\LaTeX 2}_{\epsilon}$ font changing commands, such as `\bfseries` or `\textbf{<text>}`, rather than the obsolete \LaTeX 2.09 commands, such as `\bf`. (The obsolete font changing commands will produce a warning if used.)

`\url`

`\url{<address>}`

This will typeset *<address>* in a typewriter font. Special characters, such as ~, are correctly displayed. Example:

```
\url{http://theoval.cmp.uea.ac.uk/~nlct/}
```

`\mailto` `\mailto{<email address>}`

This will typeset the given email address in a typewriter font. Note that this is not the same as `\Email`, which should only be used in the argument of `\author`.

2.3 Structure

`abstract` `\begin{abstract}`
 `<text>`
 `\end{abstract}`

The abstract text should be displayed using the abstract environment.

`keywords` `\begin{keywords}<keyword list>\end{keywords}`

The keywords should be displayed using the keywords environment.

`\acks` `\acks{<text>}`

This displays the acknowledgements.

`\section` `\section{<title>}`

Section titles are created using `\section`. The heading is automatically numbered and can be cross-referenced using `\label` and `\ref`. Unnumbered sections can be produced using:

`\section*` `\section*{<title>}`

`\subsection` `\subsection{<title>}`

Sub-section titles are created using `\subsection`. Unnumbered sub-sections can be produced using:

`\subsection*` `\subsection*{<title>}`

`\subsubsection` `\subsubsection{<title>}`

Sub-sub-section titles are created using `\subsubsection`. Unnumbered sub-sub-sections can be produced using:

`\subsubsection*` `\subsubsection*{<title>}`

Further sectioning levels can be obtained using `\paragraph` and `\subparagraph`, but these are unnumbered with running heads.

`\appendix` `\appendix`

Use `\appendix` to switch to the appendices. This changes `\section` to produce an appendix. Example:

```
\appendix
\chapter{Proof of Theorems}
```

2.4 Citations and Bibliography

The `jmlr` class automatically loads `natbib` and sets the bibliography style to `plainnat`. References should be stored in a `.bib` file.

`\bibliography` `\bibliography{<bib file>}`

This displays the bibliography.

`\citep` `\citep[<pre note>][<post note>]{<label>}`

Use `\citep` for a parenthetical citation.

`\citet` `\citet[<note>]{<label>}`

Use `\citet` for a textual citation.

See the `natbib` documentation¹ for further details.

2.5 Figures and Tables

Floats, such as figures, tables and algorithms, are moving objects and are supposed to float to the nearest convenient location. Please don't force them to go in a particular place. In general it's best to use the `htbp` specifier and don't put the float in the middle of a paragraph (that is, make sure there's a paragraph break above and below the float). Floats are supposed to have a little

¹<http://ctan.org/pkg/natbib>

extra space above and below them to make them stand out from the rest of the text. This extra space is put in automatically and shouldn't need modifying.

To ensure consistency, please ***don't*** try changing the format of the caption by doing something like:

```
\caption{\textit{A Sample Caption.}}
```

or

```
\caption{\em A Sample Caption.}
```

You can, of course, change the font for individual words or phrases. For example:

```
\caption{A Sample Caption With Some \emph{Emphasized Words}.}
```

The jmlr class provides the following command for displaying the contents of a figure or table:

```
\floatconts      \floatconts{<label>}{<caption command>}{<contents>}
```

This ensures that the caption is correctly positioned and that the contents are centered. For example:

```
\begin{table}[htbp]
\floatconts
{tab:example}% label
{\caption{An Example Table}}% caption command
{%
\begin{tabular}{ll}
\bfseries Dataset & \bfseries Result\\
Data1 & 0.123456
\end{tabular}
}
\end{table}
```

The jmlr class automatically loads graphicx which defines:

```
\includegraphics      \includegraphics[<options>]{<file name>}
```

where *<options>* is a comma-separated list of options.

For example, suppose you have an image called mypic.png in a subdirectory called images:

```
\begin{figure}[htbp]
\floatconts
{fig:example}% label
{\caption{An Example Figure}}% caption command
{\includegraphics[width=0.5\textwidth]{images/mypic}}
\end{figure}
```

Note that you shouldn't specify the file extension when including the image. It's helpful if you can also provide a grayscale version of color images. This should be labeled as the color image but with `-gray` immediately before the extension. (The extension need not be the same as that of the color image.) For example, if you have an image called `mypic.pdf`, the grayscale can be called `mypic-gray.pdf`, `mypic-gray.png` or `mypic-gray.jpg`. See Section 2.11 for further details.

`\includeteximage`

```
\includeteximage[<options>]{<file name>}
```

If your image file is made up of \TeX code (e.g. `tikz` commands) the file can be included using `\includeteximage`. The optional argument is a key=value comma-separated list where the keys are a subset of those provided by `\includegraphics`. The main keys are: `width`, `height`, `scale` and `angle`.

2.5.1 Sub-Figures and Sub-Tables

The `subfig` package causes a problem for `jmlrbook` so the `jmlr` class will give an error if it is used. Therefore the `jmlr` class provides its own commands for including sub-figures and sub-tables.

`\subfigure`

```
\subfigure[<title>][<valign>]{<contents>}
```

This makes a sub-figure where *<contents>* denotes the contents of the sub-figure. This should also include the `\label`. The first optional argument *<title>* indicates a caption for the sub-figure. By default, the sub-figures are aligned at the base. This can be changed with the second optional argument *<valign>*, which may be one of: `t` (top), `c` (centred) or `b` (base).

For example, suppose there are two images files, `mypic1.png` and `mypic2.png`, in the subdirectory `images`. Then they can be included as sub-figures as follows:

```
\begin{figure}[htbp]
\floatconts
{fig:example2}% label for whole figure
{\caption{An Example Figure.}}% caption for whole figure
{%
  \subfigure{%
    \label{fig:pic1}% label for this sub-figure
    \includegraphics{images/mypic1}
  }\quad % space out the images a bit
  \subfigure{%
    \label{fig:pic2}% label for this sub-figure
    \includegraphics{images/mypic2}
  }
}
\end{figure}
```

`\subtable` `\subtable[<title>][<valign>]{<contents>}`

This is an analogous command for sub-tables. The default value for *<valign>* is t.

2.6 Algorithms

`algorithm`

```
\begin{algorithm}
<contents>
\end{algorithm}
```

Enumerated textual algorithms can be displayed using the algorithm environment. Within this environment, use `\caption` to set the caption (and `\label` to cross-reference it). Within the body of the environment you can use the enumerate environment.

`enumerate*`

```
\begin{enumerate*}
\item <text>
...
\end{enumerate*}
```

If you want to have nested enumerate environments but you want to keep the same numbering throughout the algorithm, you can use the `enumerate*` environment, provided by the `jmlr` class. For example:

```
\begin{enumerate*}
\item Set the label of vertex  $s$  to 0
\item Set  $i=0$ 
\begin{enumerate*}
\item \label{step:locate} Locate all unlabelled vertices
adjacent to a vertex labelled  $i$  and label them  $i+1$ 
\item If vertex  $t$  has been labelled,
\begin{enumerate*}
\item[] the shortest path can be found by backtracking, and
the length is given by the label of  $t$ .
\end{enumerate*}
\end{enumerate*}
otherwise
\begin{enumerate*}
\item[] increment  $i$  and return to step~\ref{step:locate}
\end{enumerate*}
\end{enumerate*}
\end{enumerate*}
\end{algorithm}
```

algorithm2e

```
\begin{algorithm2e}
<contents>
\end{algorithm2e}
```

Pseudo code can be displayed using the algorithm2e environment, provided by the algorithm2e package, which is automatically loaded. For example:

```
\begin{algorithm2e}
\caption{Computing Net Activation}
\label{alg:net}
\dontprintsemicolon
\linesnumbered
\KwIn{$x_1, \ldots, x_n, w_1, \ldots, w_n$}
\KwOut{$y$, the net activation}
$y \leftarrow 0$;
\For{$i \leftarrow 1$ \KwTo $n$}{
  $y \leftarrow y + w_i * x_i$;
}
\end{algorithm2e}
```

See the algorithm2e documentation² for more details.

2.7 Description Lists

altdescription

```
\begin{altdescription}{<widest label>}
\item[<label>] <item text>
\end{altdescription}
```

In addition to the standard description environment, the jmlr class also provides the altdescription environment. This has an argument that should be the widest label used in the list. For example:

```
\begin{altdescription}{differentiate}
\item[add] A method that adds two variables.
\item[differentiate] A method that differentiates a function.
\end{altdescription}
```

2.8 Theorems, Lemmas etc

The jmlr class provides the following theorem-like environments: theorem, example, lemma, proposition, remark, corollary, definition, conjecture and axiom. Within the body of those environments, you can use the proof environment to

²<http://ctan.org/pkg/algorithm2e>

display the proof if need be. The theorem-like environments all take an optional argument, which gives the environment a title. For example:

```
\begin{theorem}[An Example Theorem]
\label{thm:example}
This is the theorem.
\begin{proof}
This is the proof.
\end{proof}
\end{theorem}
```

You can define your own numbered theorem-like environment using:

`\newtheorem` `\newtheorem{<name>}[<counter>]{<title>}[<outer counter>]}`

or you can define an unnumbered theorem-like environment using:

`\newtheorem*` `\newtheorem*{<name>}{<title>}`

where *<name>* is the name of the new environment and *<title>* is the title tag at the start of the environment. In the case of the numbered theorems, *<counter>* is a predefined counter to use with this theorem. If omitted, a new counter called *<name>* will be defined. The final optional argument *<outer counter>* is the name of a parent counter which, when incremented, should reset the theorem counter.

Both `\newtheorem` and `\newtheorem*` set the new theorem's style to the current defined style. The current style is set using the following commands:

`\theorembodyfont` `\theorembodyfont{<declarations>}`

This sets the font declarations used in the body of the theorem. This defaults to `\itshape`.

`\theoremheaderfont` `\theoremheaderfont{<declarations>}`

This sets the font declarations used for the theorem title. This defaults to `\bfseries`.

`\theorempostheader` `\theorempostheader{<text>}`

This indicates what should occur at the end of the title. This defaults to nothing.

`\theoremsep` `\theoremsep{<text>}`

This indicates what to put between the header and the body of the environment. This defaults to nothing.

For example, to define an unnumbered theorem-like environment called “note” with the title “Note” followed by a colon and a new line between the title and the body of the note environment:

```
\theorembodyfont{\upshape}
\theoremheaderfont{\scshape}
\theorempostheader{:}
\theoremsep{\newline}
\newtheorem*{note}{Note}
```

Now it can be used in the document environment:

```
\begin{note}
This is an unnumbered theorem-like environment.
\end{note}
```

2.9 Cross-Referencing

Always use `\label` when cross-referencing, rather than writing the number explicitly. The `jmlr` class provides some convenience commands to assist referencing. These commands, described below, can all take a comma-separated list of labels.

`\sectionref` `\sectionref{\langle label list \rangle}`

Used to refer to a section or sections. For example, if you defined a section as follows:

```
\chapter{Results}\label{sec:results}
```

you can refer to it as follows:

The results are detailed in `\sectionref{sec:results}`.

This command may also be used for sub-sections and sub-sub-sections.

`\appendixref` `\appendixref{\langle label list \rangle}`

Used to refer to an appendix or multiple appendices.

`\equationref` `\equationref{\langle label list \rangle}`

Used to refer to an equation or multiple equations.

`\tableref` `\tableref{\langle label list \rangle}`

Used to refer to a table or multiple tables. This can also be used for sub-tables where the main table number is also required.

<code>\subtabref</code>	<code>\subtabref{<label list>}</code>	Used to refer to sub-tables without the main table number, e.g. (a) or (b).
<code>\figureref</code>	<code>\figureref{<label list>}</code>	Used to refer to a figure or multiple figures. This can also be used for sub-figures where the main figure number is also required, e.g. 2(a) or 4(b).
<code>\subfigref</code>	<code>\subfigref{<label list>}</code>	Used to refer to sub-figures without the main figure number, e.g. (a) or (b).
<code>\algorithmref</code>	<code>\algorithmref{<label list>}</code>	Used to refer to an algorithm or multiple algorithms.
<code>\theoremref</code>	<code>\theoremref{<label list>}</code>	Used to refer to a theorem or multiple theorems.
<code>\lemmaref</code>	<code>\lemmaref{<label list>}</code>	Used to refer to a lemma or multiple lemmas.
<code>\remarkref</code>	<code>\remarkref{<label list>}</code>	Used to refer to a remark or multiple remarks.
<code>\corollaryref</code>	<code>\corollaryref{<label list>}</code>	Used to refer to a corollary or multiple corollaries.
<code>\definitionref</code>	<code>\definitionref{<label list>}</code>	Used to refer to a definition or multiple definitions.
<code>\conjectureref</code>	<code>\conjectureref{<label list>}</code>	Used to refer to a conjecture or multiple conjectures.
<code>\axiomref</code>	<code>\axiomref{<label list>}</code>	Used to refer to an axiom or multiple axioms.

`\exempleref` `\exempleref{<label list>}`

Used to refer to an example or multiple examples.

2.10 Mathematics

The `jmlr` class loads the `amsmath` package so you can use any of the commands and environments defined in that package. A brief summary of some of the more common commands and environments is provided here. See the `amsmath` documentation³ for further details.

`\set` `\set{<text>}`

In addition to the commands provided by `amsmath`, the `jmlr` class also provides the `\set` command which can be used to typeset a set. For example:

The universal set is denoted \set{U}

Unnumbered single-line equations should be displayed using `\[` and `\]`. For example:

$$[E = m c^2]$$

Numbered single-line equations should be displayed using the equation environment. For example:

```
\begin{equation}\label{eq:trigrule}
\cos^2\theta + \sin^2\theta \equiv 1
\end{equation}
```

Multi-lined numbered equations should be displayed using the `align` environment. For example:

```
\begin{align}
f(x) &= x^2 + x \label{eq:f} \\
f'(x) &= 2x + 1 \label{eq:df}
\end{align}
```

Unnumbered multi-lined equations should be displayed using the `align*` environment. For example:

```
\begin{align*}
f(x) &= (x+1)(x-1) \\
&= x^2 - 1
\end{align*}
```

³<http://ctan.org/pkg/amsmath>

If you want to mix numbered with unnumbered lines use the align environment and suppress unwanted line numbers with \nonumber. For example:

```
\begin{align}
y &= x^2 + 3x - 2x + 1\nonumber\\
&= x^2 + x + 1\label{eq:y}
\end{align}
```

An equation that is too long to fit on a single line can be displayed using the split environment.

Text can be embedded in an equation using \text{\langle text \rangle} or you can use \intertext{\langle text \rangle} to interrupt a multi-line environment such as align.

Predefined operator names are listed in [table 2.1](#). For additional operators, either use

\operatorname

\operatorname{\langle name \rangle}

for example

```
If $X$ and $Y$ are independent,
$\operatorname{var}(X+Y) =
\operatorname{var}(X) + \operatorname{var}(Y)$
```

or declare it with

\DeclareMathOperator

\DeclareMathOperator{\command}{\langle name \rangle}

for example

```
\DeclareMathOperator{\var}{var}
```

and then use this new command:

```
If $X$ and $Y$ are independent,
$\var(X+Y) = \var(X)+\var(Y)$
```

If you want limits that go above and below the operator (like \sum) use the starred versions (\operatorname* or \DeclareMathOperator*).

2.11 Color vs Grayscale

It's helpful if authors supply grayscale versions of their articles in the event that the article is to be incorporated into a black and white printed book. With external PDF, PNG or JPG graphic files, you just need to supply a grayscale version of the file. For example, if the file is called myimage.png, then the gray version should be myimage-gray.png or myimage-gray.pdf or myimage-gray.jpg. You don't need to modify your code. The jmlr class checks for the existence of the grayscale version if it is print mode (provided you have used \includegraphics and haven't specified the file extension).

Table 2.1: Predefined Operator Names (taken from amsmath documentation)

<code>\arccos</code>	<code>arccos</code>	<code>\deg</code>	<code>deg</code>	<code>\lg</code>	<code>lg</code>	<code>\projlim</code>	<code>projlim</code>
<code>\arcsin</code>	<code>arcsin</code>	<code>\det</code>	<code>det</code>	<code>\lim</code>	<code>lim</code>	<code>\sec</code>	<code>sec</code>
<code>\arctan</code>	<code>arctan</code>	<code>\dim</code>	<code>dim</code>	<code>\liminf</code>	<code>liminf</code>	<code>\sin</code>	<code>sin</code>
<code>\arg</code>	<code>arg</code>	<code>\exp</code>	<code>exp</code>	<code>\limsup</code>	<code>limsup</code>	<code>\sinh</code>	<code>sinh</code>
<code>\cos</code>	<code>cos</code>	<code>\gcd</code>	<code>gcd</code>	<code>\ln</code>	<code>ln</code>	<code>\sup</code>	<code>sup</code>
<code>\cosh</code>	<code>cosh</code>	<code>\hom</code>	<code>hom</code>	<code>\log</code>	<code>log</code>	<code>\tan</code>	<code>tan</code>
<code>\cot</code>	<code>cot</code>	<code>\inf</code>	<code>inf</code>	<code>\max</code>	<code>max</code>	<code>\tanh</code>	<code>tanh</code>
<code>\coth</code>	<code>coth</code>	<code>\injlim</code>	<code>injlim</code>	<code>\min</code>	<code>min</code>		
<code>\csc</code>	<code>csc</code>	<code>\ker</code>	<code>ker</code>	<code>\Pr</code>	<code>Pr</code>		
		<code>\varlimsup</code>	\varlimsup	<code>\varinjlim</code>	\varinjlim		
		<code>\varliminf</code>	\varliminf	<code>\varprojlim</code>	\varprojlim		

`\ifprint`

`\ifprint{<true part>}{<false part>}`

You can use `\ifprint` to determine which mode you are in. For example:

```
in \figureref{fig:nodes}, the
\ifprint{dark gray}{purple}
ellipse represents an input and the
\ifprint{light gray}{yellow} ellipse
represents an output.
```

Another example:

```
{\ifprint{\bfseries}{\color{red}}important text!}
```

You can use the class option `gray` to see how the document will appear in gray scale mode.

The `xcolor` class is loaded with the `x11names` option, so you can use any of the `x11` predefined colors (listed in the `xcolor` documentation⁴).

2.12 Where To Go For Help

If you have a general \LaTeX query, the first place to go to is the UK TUG FAQ⁵.

If you are unfamiliar or just getting started with \LaTeX , there's a list of on-line introductions to \LaTeX at: <http://www.tex.ac.uk/cgi-bin/texfaq2html?label=man-latex>

There are also forums, mailing lists and newsgroups. For example, the \LaTeX Community (<http://www.latex-community.org/>), the `texhax` mailing list (<http://tug.org/mailman/listinfo/texhax>) and `comp.text.tex`

⁴<http://ctan.org/pkg/xcolor>

⁵<http://www.tex.ac.uk/faq>

(archives available at <http://groups.google.com/group/comp.text.tex/>). The best place for queries about the jmlr class is the “Document Classes” section of the \LaTeX Community Forum, as there’s a high chance I’ll see it there and help if I can. (Emails directly to me tend to get lost in my overcrowded inbox.)

Documentation for packages or classes can be found using the texdoc application. For example:

```
texdoc natbib
```

Alternatively, you can go to <http://www.ctan.org/pkg/⟨name⟩> where $\langle name \rangle$ is the name of the package. For example: <http://www.ctan.org/pkg/natbib>

For a general guide to preparing papers (regardless of whether you are using \LaTeX or a word processor), see Kate L. Turabian, “A manual for writers of term papers, theses, and dissertations”, The University of Chicago Press, 1996.

3 Guidelines for Production Editors

The `jmlrbook` class can be used to combine articles that use the `jmlr` document class into a book. The following sample files are provided: `paper1/paper1.tex`, `paper2/paper2.tex`, `paper3/paper3.tex`, `jmlr-sample.tex`, `jmlrwcp-sample.tex`, `jmlrbook-sample.tex` and `proceedings-sample.tex`. All but the last two are articles using the `jmlr` class. The last two (`jmlrbook-sample.tex` and `proceedings-sample.tex`) uses the `jmlrbook` class file to combine the articles into a book. Note that no modifications are needed to the files using the `jmlr` class when they are imported into the book. They can either be compiled as stand-alone articles or with the entire book.

Before you compile the book, make sure that all the articles compile as stand-alone documents (and run BibTeX where necessary). You can use the `makejmlrbookgui` application to compile the book and create associated HTML files. See <http://www.dickimaw-books.com/apps/makejmlrbookgui/> for details.

3.1 `jmlrbook` Class Options

nowcp The imported pre-published articles were published in the Journal of Machine Learning Research (default).

wcp The imported pre-published articles were published in the JMLR Workshop and Conference Proceedings.

If the book has a mixture of JMLR and JMLR WCP articles, you can switch between them using

`\jmlrwcp`

`\jmlrwcp`

and

`\jmlrnowcp`

`\jmlrnowcp`

Alternatively, you can set the name of the journal or conference proceedings using:

`\jmlrproceedings`

`\jmlrproceedings{<short title>}{<long title>}`

color Color version (see Section 2.11). Use this option for the on-line version with hyperlinks enabled (default).

gray Grayscale version (see Section 2.11). Use this option for the print version without hyperlinks.

tablecaption=top in a table environment, `\floatconts` puts the caption at the top.

tablecaption=bottom in a table environment, `\floatconts` puts the caption at the bottom.

letterpaper Set the paper size to letter (default).

7x10 Set the paper size to 7 × 10 inches.

10pt Use 10pt as the normal text size.

11pt Use 11pt as the normal text size (default).

12pt Use 12pt as the normal text size.

3.2 The Preamble

Any packages that the imported articles load (which aren't automatically loaded by `jmlr`) must be loaded in the book's preamble. For example, if one or more of the articles load the `siunitx` package, this package must be loaded in the book.

Commands that are defined in the imported articles will be local to that article unless they have been globally defined using `\gdef` or `\global`. Since most authors use `\newcommand` and `\newenvironment` (or `\renewcommand` and `\renewenvironment`) this shouldn't cause a conflict if more than one article has defined the same command or environment. For example, in the sample files supplied, both `paper1/paper1.tex` and `paper2/paper2.tex` have defined the command `\samplecommand` using `\newcommand`. As long as this command isn't also defined in the book, there won't be a conflict.

`\title`

`\title[<PDF title>]{<book title>}`

In the book preamble, `\title` sets the book title and the optional argument is used for the PDF title, which will be displayed when the reader views the PDF file's properties in their PDF viewer. (Note that in the imported articles, `\title` sets the article's title and the optional argument sets the short title for the page header and table of contents.)

`\author` `\author[\textit{PDF author(s)}]{\textit{book author(s)}}`

In the book preamble, `\author` sets the book's author (or editor) and the optional argument is used for the PDF author, which will be displayed when the reader views the PDF file's properties in their PDF viewer. (Note that in the imported articles, `\author` sets the article's author and the optional argument sets the short author list for the page header.)

`\volume` `\volume{\textit{number}}`

This command sets the book's volume number. Omit if the book has no volume number.

`\subtitle` `\subtitle{\textit{sub-title}}`

This command sets the book's subtitle. Omit if the book has no sub-title.

`\logo` `\logo[\textit{url}]{\textit{image command}}`

This sets the book's title image. Use `\includegraphics` and omit the file extension. If you provide a grayscale version as well as a color version, the grayscale version will be used for the print version of the book. (See Section 2.11 for further details.) The optional argument, if present, is used by `makejmlrbookgui` to make the logo a link to `\textit{url}` on the index HTML page, otherwise it's ignored.

`\team` `\team{\textit{team title}}`

This can be used to set the name of the editorial team. This command may be omitted if not required.

`\productioneditor` `\productioneditor{\textit{name}}`

This command may be used to name the production editor. The command may be omitted if not required.

See Section 3.4 for details on how to modify the layout of the title page.

3.3 Main Book Commands

All commands that are provided by the `jmlr` class are also available with the `jmlrbook` class, but some commands might behave differently depending on whether they are in the main part of the book or within the imported articles.

In the main part of the book you can use the following commands:

`\maketitle` `\maketitle`

This displays the book's title page. Note that `\maketitle` has a different effect when used in imported articles.

`\frontmatter`

```
\frontmatter
```

Use this command at the start of the front matter (e.g. before the foreword or preface). This will make chapters unnumbered even if you use `\chapter` instead of `\chapter*`. It also sets the page style and sets the page numbering to lower case Roman numerals.

`authorsignoff`

```
\begin{authorsignoff}
<author list>
\end{authorsignoff}
```

This environment may be used by the author signing off at the end of a chapter such as the foreword. Within the environment use:

`\Author`

```
\Author{<details>}
```

for the author's details. More than one `\Author` should be used if there is more than one author. Example:

```
\begin{authorsignoff}
\Author{Nicola Talbot\
University of East Anglia}
\Author{Anne Author\
University of No Where}
\end{authorsignoff}
```

`preface`

```
\begin{preface}[<filename>]
```

This environment may be used to typeset the preface. This starts a new chapter using

```
\chapter{\prefacename}
```

`\prefacename`

where `\prefacename` defaults to "Preface". This environment should typically go in the front matter and is provided to allow `makejmlrbookgui` create a standalone document for the preface. The optional argument is the filename (without any extension or path) that will be used by `makejmlrbookgui`. This defaults to `preface` but, to conform with JMLR guidelines, should be changed to the surname of the first author (editor) followed by the final two digits of the year. See the JMLR website for further details of the guidelines.

`signoff`

```
\begin{signoff}[<team name>]{<date>}
<editor list>
\end{signoff}
```

This environment may be used by the editorial team when signing off a chapter such as the preface. If the optional argument is omitted, “The Editorial Team” is used. If you are using the preface environment described above, the signoff environment must go inside the preface environment.

Within the signoff environment use:

`\Editor`

`\Editor{<details>}`

for each editor. Example:

```
\begin{signoff}{March 2010}
% First editor:
\Editor{Nicola Talbot\\
University of East Anglia\\
\mailto{N.Talbot@uea.ac.uk}}
% Second editor:
\Editor{Anne Editor\\
University of Nowhere\\
\mailto{ae@sample.com}}
\end{signoff}
```

`\tableofcontents`

`\tableofcontents`

This command displays the book’s table of contents. Note that it has a different effect if used in an imported article.

`\mainmatter`

`\mainmatter`

Use this command to switch to the book’s main matter. This will switch the chapter numbering back on, reset the page numbering to Arabic and set up the main page style.

`\part`

`\part [<short title>]{<title>}`

If used in the main part of the book, this command will start a new part and issue a clear double page. Note that this command has a different effect if used in an imported article (or inside the `jmlrpapers` environment).

`\addtocpart`

`\addtocpart{<title>}`

This adds `<title>` to the table of contents, issues a clear double page, but doesn’t display any text or affect the part numbering.

`\chapter`

`\chapter [<short title>]{<title>}`

This command may be used in the main body of the book but will cause an error if used within an imported article (or inside the `jmlrpapers` environment).

<code>\section</code>	<code>\section[<i><short title></i>]{<i><title></i>}</code>
-----------------------	---

<code>\subsection</code>	<code>\subsection[<i><short title></i>]{<i><title></i>}</code>
--------------------------	--

<code>\subsubsection</code>	<code>\subsubsection[<i><short title></i>]{<i><title></i>}</code>
-----------------------------	---

<code>\paragraph</code>	<code>\paragraph[<i><short title></i>]{<i><title></i>}</code>
-------------------------	---

<code>\subparagraph</code>	<code>\subparagraph[<i><short title></i>]{<i><title></i>}</code>
----------------------------	--

These commands may be used in the main body of the book or within imported articles. In the main body of the book (outside of the `jmlrpapers` environment) they need to be within a chapter and will be numbered according to the chapter.

<code>\appendix</code>	<code>\appendix</code>
------------------------	------------------------

If used in the main body of the book (*outside* of the `jmlrpapers` environment) this will switch to the book appendices. Subsequent `\chapter` commands will produce the appendices. (Any imported articles in the appendix will be identified by `makejmlrbookgui` as supplemental material.) If used within an imported article (or within the `jmlrpapers` environment) `\appendix` will switch to the article appendices and won't affect the main part of the book.

<code>jmlrpapers</code>	<code>\begin{jmlrpapers}</code> <code><i><imported papers></i></code> <code>\end{jmlrpapers}</code>
-------------------------	---

This environment must be used when importing articles and may be used as often as required. Take care not to include book sectioning commands, such as `\chapter`, in this environment. Within the `jmlrpapers` environment, use the following commands to import articles:

<code>\importpubpaper</code>	<code>\importpubpaper[<i><label></i>]{<i><directory></i>}{<i><file></i>}{<i><pages></i>}</code>
------------------------------	---

This imports an article that has already been published elsewhere. The *<pages>* argument should be the page range from the *previously published* version of

this article. This may not necessarily be the same as the page range of the article in the book. The directory the imported file is contained in is given by $\langle directory \rangle$. If the file is in the same directory as the book, use a dot. The file name is given by $\langle file \rangle$. The article is also given a label, specified by the optional argument. This is $\langle directory \rangle / \langle file \rangle$ by default. The label is used as a prefix to labels in the imported articles which ensures that cross-references are unique. You can also use this label to reference the article elsewhere in the book (see Section 3.3.2).

`\importpaper` `\importpaper[\langle label \rangle]{\langle directory \rangle}{\langle file \rangle}`

Imports an article that is being published in the book. The arguments are the same as above except that there is no page range (the page range is computed automatically).

`\importarticle` `\importarticle[\langle label \rangle]{\langle directory \rangle}{\langle file \rangle}`

This imports an article that hasn't been published elsewhere. There is no page range, but the other arguments are the same as those describe above for `\importpubpaper`.

Example: to import a previously published paper `paper1/paper1.tex` and an unpublished paper `paper2/paper2.tex`:

```
\begin{jmlrpapers}
\importpubpaper{paper1}{paper1}{23--45}
\importarticle{paper2}{paper2}
\end{jmlrpapers}
```

3.3.1 Two Column Articles in a One Column Book

The `jmlrbook` class `column` style will override the column style of the imported articles. You can use the `twocolumn` class option to `jmlrbook`, but this will make the whole book with two columns. If you only want the imported articles to be in two columns, then put `\twocolumn` in the `jmlrpapers` environment to switch on two column formatting. The effect will be localised to the end of the environment.

3.3.2 Cross-Referencing

You can cross-reference other parts of the book using the standard `\label/\ref` mechanism, but if you want to reference something within an imported article, you must prefix the label with the label given when importing the article (that is, the optional argument to `\importpubpaper`, `\importpaper` or `\importarticle`). For example, if you want to reference a section labelled

sec:results in the imported paper paper1/paper1.tex, you would need to do:

```
see Section~\ref{paper1/paper1sec:results}
```

or

```
see \sectionref{paper1/paper1sec:results}
```

In addition to the commands described in Section 2.9, the jmlrbook class also provides the following cross-referencing commands:

<code>\chapterref</code>	<code>\chapterref{<label list>}</code>
--------------------------	--

Reference a chapter or chapters. The argument is a comma-separated list of labels.

<code>\articlepageref</code>	<code>\articlepageref{<label>}</code>
------------------------------	---

This displays the starting page number of the article whose label is given by <label>. Note that this must be a single label, not a list. For example:

An interesting article starts on page~\articlepageref{paper1/paper1}

<code>\articlepagesref</code>	<code>\articlepagesref{<label>}</code>
-------------------------------	--

This displays the page range of the article whose label is given by <label>. Again, this must be a single label, not a list. This page range is unrelated to the <pages> argument of \importpubarticle.

<code>\articletitleref</code>	<code>\articletitleref{<label>}</code>
-------------------------------	--

This displays the short title for the article whose label is given by <label>. Again, this must be a single label, not a list.

<code>\articleauthorref</code>	<code>\articleauthorref{<label>}</code>
--------------------------------	---

This displays the author list for the article whose label is given by <label>. Again, this must be a single label, not a list.

3.4 Altering the Layout of the Main Title Page

<code>\titlebody</code>	<code>\titlebody</code>
-------------------------	-------------------------

The main body of the book's title page is given by the command \titlebody. Within the definition of this command, you can use:

\SetTitleElement

```
\SetTitleElement{<element>}{<pre>}{<post>}
```

where *<element>* can be: title, volume, issue¹, subtitle, logo, team, author, date, productioneditor. The *<pre>* and *<post>* arguments specify what to do before and after the element. Note that \SetTitleElement does nothing if that element hasn't been set. For example, if \volume has been omitted or \volume{} is used, then

```
\SetTitleElement{volume}{\mainvolumefont}{\postmainvolume}
```

will do nothing (so you don't end up with **Volume :**).

\IfTitleElement

```
\IfTitleElement{<element>}{<true part>}{<false part>}
```

This does *<true part>* if *<element>* has been set otherwise it does *<false part>*. For example, \postmainvolume is defined as:

```
\newcommand{\postmainvolume}{%  
  \IfTitleElement{subtitle}{}{:}\par\relax  
}
```

This means that it will only print a colon after the volume number if the subtitle has been set.

The default definition of \titlebody is:

```
\newcommand{\titlebody}{%  
  \SetTitleElement{title}{\maintitlefont}{\postmaintitle}%  
  \SetTitleElement{volume}{\mainvolumefont}{\postmainvolume}%  
  \SetTitleElement{subtitle}{\mainsubtitlefont}{\postmainsubtitle}%  
  \SetTitleElement{logo}{\mainlogofont}{\postmainlogo}%  
  \SetTitleElement{team}{\mainteamfont}{\postmainteam}%  
  \SetTitleElement{author}{\mainauthorfont}{\postmainauthor}%  
  \SetTitleElement{productioneditor}{\mainproductioneditorfont}%  
    {\postmainproductioneditor}%  
}
```

3.5 Potential Pitfalls

The combine class and hyperref package are individually both easily broken by packages that change certain internals and they don't ordinarily work together. The jmlrbook class applies patches to the internal referencing mechanism to make them work together, but it's a fairly fragile alliance. Some packages are known to break it, for example subfig, pdfpages and geometry. This is why the jmlr class checks for known problem packages and generates an error message to dissuade authors from using them. It's likely that there are other packages

¹The default title page layout doesn't use issue, but if required it can be set with \issue{<number>}

that may cause a problem and, as they are found, they will be added to the check list. Also, it's possible for an author to disable the package checking mechanism if they are determined to use a particular package.

In the event that an article has loaded a problem package, the editors will have to decide whether to ask the author to change the article so that it doesn't cause a problem or to make the changes themselves or to find a way of fudging things to get it to work. It depends on the level of \LaTeX expertise amongst the editors and the time available.

Another problem that can arise is when different articles use packages that conflict. For example, one article uses package foo and another uses package bar. Each article compiles okay as a stand-alone article, but when combined foo and bar conflict. Another problem may occur when articles load the same package but with conflicting package options. To reduce the chance of this occurring, the jmlr class loads some commonly used packages. For example, it loads the algorithm2e package with the algo2e and ruled options and provides the algorithm environment in addition to algorithm2e's algorithm2e environment. Different versions of the same package can also be a problem. To help counteract the problem caused by different papers using different versions of the algorithm2e package, jmlrbook defines most of the old style commands if they don't exist.

Articles that use different input encodings can also cause a problem. For example, if one article uses utf8 and another uses latin1. If the authors have directly entered a diacritic or ligature, such as é or æ, instead of using a \LaTeX command, such as \’e or \ae, then this will cause an error on compiling the book.² The choice then is to either change all non-keyboard characters with the appropriate \LaTeX commands or to use the \inputencoding command, supplied by the inputenc package, to switch the encoding at the start of each article. One thing to watch out for are bib files that contain a mixture of encodings caused by copying and pasting from different sources. Version 0.4.2b of makejmlrbookgui provides a function to search for characters outside the range 0x20 (space) and 0x7E (tilde).

Authors who use \nonumber within an equation environment can mess up the hyperlinks. Remove \nonumber and change the equation environment to \[... \] (or just make it a numbered equation).

If the article changes the graphics path using \graphicspath, jmlrbook won't find the graphics if the imported articles aren't in the same directory as the book.

The makejmlrbookgui application provides some diagnostic tools, which can help detect some common problems. It's manual also has a [troubleshooting section](#).

²and may also cause a problem for the editor's text editor.

3.6 Creating the Book Using makejmlrbook

The makejmlrbook script has been superseded by the makejmlrbookgui application, which can be downloaded from <http://www.dickimaw-books.com/apps/makejmlrbookgui/>.

The makejmlrbook Perl script is designed to make it easier to produce the print and online versions of the book, as well as producing an HTML index of all the imported articles with links to the abstracts and PDFs of individual articles. Note that for it to work properly, the articles must be imported using `\importarticle`, `\importpaper` or `\importpubpaper`, and the imported articles must use the `jmlr` class. Note that I have only tested makejmlrbook on Linux.

On UNIX style systems, the script can be invoked from a terminal using:

```
makejmlrbook [<options>] <filename>
```

If that doesn't work, or you aren't using a UNIX style operating system, the script can be invoked from a terminal or command prompt using:

```
perl makejmlrbook [<options>] <filename>
```

The mandatory argument *<filename>* is the name of the master \TeX file containing the book. It must use the `jmlrbook` class. You may omit the `.tex` extension. For example, if the file is called `proceedings.tex`, you can call `makejmlrbook` as follows:

```
perl makejmlrbook proceedings
```

This will create the files `proceedings-print.pdf` (the print version) and `proceedings-online.pdf` (the online version). It will also create a directory (folder) called `html` in which the HTML files and individual article PDFs will be placed.

The options to `makejmlrbook` are as follows:

- `--online` Generate the color on-line version (default).
 - `--noonline` Don't generate the color on-line version.
 - `--print` Generate the grayscale print version (default).
 - `--noprint` Don't generate the grayscale print version.
 - `--html` Generate the HTML files and the individual article PDFs (default).
- Caveat: $\text{\TeX}4\text{\HIT}$ no longer works with the `jmlr` class.*

- nohtml Don't generate the HTML files and the individual article PDFs.
- logourl *<url>* Make the logo on the HTML index page link to *<url>*.
- extractpreface Extract the preface as a standalone document with links in the HTML index. (Only has an effect if combined with --html option.) This will only work if the preface has been put inside the preface environment with the signoff environment that each editor with \Editor.
- noextractpreface Don't try extracting the preface. (Default.)
- batchtex Run \TeX in batch mode.
- nobatchtex Don't run \TeX in batch mode (default).
- quieter Reduce chatter to STDOUT (doesn't eliminate all messages). This also runs \TeX in batch mode.
- noquieter Don't reduce messages to STDOUT (default).
- version Display the version number and exit.
- help List all available options.

There are also some more advanced options, but these haven't been fully tested:

- latexapp *<name>* Application used to call \LaTeX . Defaults to "pdflatex".
- latexopt *<string>* Options to pass to \LaTeX .
- format *<string>* Output format (defaults to "pdf"). This may need to be changed if you change the \LaTeX application.
- bibtexapp *<name>* Application use to process the bibliography. Defaults to "bibtex".
- bibtexopt *<string>* Options to pass to Bib \TeX .

4 The Code

4.1 jmlr.cls Code

This class is based on the jmlr2e package but was modified to make sure it works with jmlrbook which uses both combine and hyperref.

Declare class and required TeX format:

```
1 \NeedsTeXFormat{LaTeX2e}
2 \ProvidesClass{jmlr}[2014/09/29 v1.19 (NLCT) Journal of Machine Learning Research]
```

Need xkeyval package to have key=value class options

```
3 \RequirePackage{xkeyval}
```

```
4 \RequirePackage{calc}
```

```
5 \RequirePackage{etoolbox}
```

Some packages need to be loaded before hyperref so provide a hook to do this:

```
\jmlrprehyperref
```

```
6 \providecommand*\jmlrprehyperref{}
```

The following conditionals are provided to make this class play nicely with combine and aren't required for articles.

```
7 \newif\if@openright
```

```
8 \newif\if@mainmatter \@mainmattertrue
```

```
\ifgrayscale Determine whether to select grayscale alternatives
```

```
9 \@ifundefined{ifgrayscale}{
```

```
10 \newif\ifgrayscale
```

```
11 \grayscalefalse
```

```
12 }{}
```

```
13 \DeclareOptionX{color}{\grayscalefalse
```

```
14 \PassOptionsToPackage{color}{xcolor}}
```

```
15 \DeclareOptionX{gray}{\grayscaletrue
```

```
16 \PassOptionsToPackage{gray}{xcolor}}
```

```
draft
```

```
17 \DeclareOptionX{draft}{\setlength\overfullrule{5pt}}
```

```
final
```

```
18 \DeclareOptionX{final}{\setlength\overfullrule{0pt}}
```

```

\iftablecaptiontop Determine if the table captions should go at the top.
19 \newif\iftablecaptiontop
20 \tablecaptiontoptrue
21 \DeclareOptionX{tablecaptiontop}{\tablecaptiontoptrue}
22 \DeclareOptionX{tablecaptionbottom}{\tablecaptiontopfalse}
23
24 \define@choicekey{jmlr.cls}{tablecaption}[\val\nr]{top,bottom}{%
25   \ifcase\nr\relax
26     \tablecaptiontoptrue
27   \or
28     \tablecaptiontopfalse
29   \fi
30 }

\ifjmlrhtml Determine if we are using TeX4ht:
31 \newif\ifjmlrhtml
32 \jmlrhtmlfalse
33 \DeclareOptionX{html}{\jmlrhtmltrue}
34 \DeclareOptionX{nohtml}{\jmlrhtmlfalse}

Normal font size (default is 11pt).
35 \def\pt@size{11pt}
36 \DeclareOptionX{10pt}{\renewcommand{\pt@size}{10pt}}
37 \DeclareOptionX{11pt}{\renewcommand{\pt@size}{11pt}}
38 \DeclareOptionX{12pt}{\renewcommand{\pt@size}{12pt}}

\@jmlrproceedings The name of the proceedings.
39 \newcommand*{\@jmlrproceedings}{Journal of Machine Learning Research}

jmlrabbrvproceedings The abbreviated name of the proceedings.
40 \newcommand*{\@jmlrabbrvproceedings}{JMLR}

\jmlrproceedings Sets the title and abbreviation of the proceedings
41 \newcommand*{\jmlrproceedings}[2]{%
42   \renewcommand*{\@jmlrabbrvproceedings}{\#1}%
43   \renewcommand*{\@jmlrproceedings}{\#2}%
44 }

\nowcp
45 \newcommand*{\jmlrnowcp}{%
46   \jmlrproceedings{JMLR}{Journal of Machine Learning Research}%
47 }

\wcp
48 \newcommand*{\jmlrwcp}{%
49   \jmlrproceedings{JMLR W&CP}{JMLR: Workshop and Conference Proceedings}%
50 }

```

This isn't an article for a workshop:

```
51 \DeclareOptionX{nowcp}{\jmlrnowcp}
```

This is an article for a workshop

```
52 \DeclareOptionX{wcp}{\jmlrwcp}
```

The default paper size is letter, but provide 7 × 10in alternative:

```
53 \newif\ifviiXx
```

```
54 \viiXxfalse
```

```
55 \DeclareOptionX{7x10}{\viiXxtrue}
```

```
56 \DeclareOptionX{letterpaper}{\PassOptionsToPackage{letterpaper}{typearea}}
```

Pass all remaining options to article class:

```
57 \DeclareOptionX*{\PassOptionsToClass{\CurrentOption}{article}}
```

Execute required options:

```
58 \ExecuteOptions{twoside,letterpaper}
```

Process options:

```
59 \ProcessOptionsX
```

Load article class.

```
60 \LoadClass[\pt@size]{article}
```

Can't use geometry package because it doesn't play nicely with the combine class.

```
61 \ifviiXx
```

```
62 \setlength{\paperwidth}{7in}
```

```
63 \setlength{\paperheight}{10in}
```

```
64 \setlength{\textwidth}{5.25in}
```

```
65 \setlength{\textheight}{8.2in}
```

```
66 \setlength{\topmargin}{0.4in}
```

```
67 \setlength{\headheight}{0.2in}
```

```
68 \setlength{\headsep}{0.2in}
```

```
69 \setlength{\hoffset}{-1in}
```

```
70 \setlength{\voffset}{-1in}
```

```
71 \setlength{\evensidemargin}{0.75in}
```

```
72 \setlength{\oddsidemargin}{1.0in}
```

```
73 \else
```

```
74 \setlength{\oddsidemargin}{0.25in}
```

```
75 \setlength{\evensidemargin}{0.25in}
```

```
76 \setlength{\marginparwidth}{0.07 true in}
```

```
77 \setlength{\topmargin}{-0.5in}
```

```
78 \addtolength{\headsep}{0.25in}
```

```
79 \setlength{\textheight}{8.5 true in}
```

```
80 \setlength{\textwidth}{6.0 true in}
```

```
81 \fi
```

Need to add jmlr end document hook before natbib adds a \clearpage to it.

```
82 \AtEndDocument{\@jmlrenddoc}
```

Required packages:

```
83 \RequirePackage{amsmath}
84 \RequirePackage{amssymb}
85 \RequirePackage{natbib}
86 \RequirePackage{graphicx}
87 \RequirePackage{url}
88 \RequirePackage{x11names}{xcolor}
```

Allow old command names in the event that the proceedings contains a mixture of papers that use old and new versions. (This means that editors need to install the newer version.)

```
89 \RequirePackage[algo2e,ruled]{algorithm2e}
```

Do all the stuff that needs to be done before hyperref is loaded:

```
90 \jmlrprehyperref
```

Do stuff that has to come immediately before hyperref is loaded:

```
91 \@ifundefined{@pre@hyperref}{}{\@pre@hyperref}
```

Load hyperref:

```
92 \RequirePackage{hyperref}
93 \RequirePackage{nameref}

94 % Do stuff that has to come immediately after \sty{hyperref} and
95 % \sty{nameref} are loaded:
96 % \changes{1.16}{2012/05/15}{added \cs{@post@hyperref}}
97 \@ifundefined{@post@hyperref}{}{\@post@hyperref}
```

Set up hyperref options:

```
98 \hypersetup{colorlinks,
99             linkcolor=blue,
100             citecolor=blue,
101             urlcolor=magenta,
102             linktocpage,
103             plainpages=false}
```

If this is the print version, need to disable the hyperlinks:

```
104 \ifgrayscale
105   \hypersetup{draft}
106 \fi
```

Float parameters: the following settings were copied from jmlr2e.sty

```
107 \renewcommand{\topfraction}{0.95} % let figure take up nearly whole page
108 \renewcommand{\textfraction}{0.05} % let figure take up nearly whole page
```

widows/orphans

```
109 \widowpenalty=10000\relax
110 \clubpenalty=10000\relax
```

Set two-sided format

```
111 \@twoside true
```

Put marginal notes on the outside of the page

```
112 \@mparswitch true
```

Use the plainnat bibliography style and set up the required punctuation.

```
113 \bibliographystyle{plainnat}
114 \bibpunct{(}{)}{;}{a}{,}{,}
```

4.1.1 Sections

`\section`

```
115 \renewcommand{\section}{\@startsection{section}{1}{\z@}%
116   {-0.24in \@plus -1ex \@minus -.2ex}%
117   {0.10in \@plus .2ex}%
118   {\normalfont\rmfamily\bfseries\large\raggedright}%
119 }
```

`\subsection`

```
120 \renewcommand\subsection{\@startsection{subsection}{2}{\z@}%
121   {-0.20in \@plus -1ex \@minus -.2ex}%
122   {0.08in \@plus .2ex}%
123   {\normalfont\rmfamily\bfseries\normalsize\raggedright}%
124 }
```

`\subsubsection`

```
125 \renewcommand\subsubsection{\@startsection{subsubsection}{3}{\z@}%
126   {-0.18in \@plus -1ex \@minus -.2ex}%
127   {0.08in \@plus .2ex}%
128   {\normalfont\normalsize\rmfamily\mdseries\scshape\raggedright}%
129 }
```

`\paragraph`

```
130 \renewcommand\paragraph{\@startsection{paragraph}{4}{\z@}%
131   {1.5ex plus 0.5ex minus .2ex}%
132   {-1em}%
133   {\normalfont\normalsize\rmfamily\bfseries}%
134 }
```

`\subparagraph`

```
135 \renewcommand\subparagraph{\@startsection{subparagraph}{5}{\z@}%
136   {1.5ex plus 0.5ex minus .2ex}%
137   {-1em}%
138   {\normalfont\normalsize\rmfamily\bfseries\itshape}}
```

`\@secntformat` Redefine the way the section number appears in the section heading.

```
139 \renewcommand*\@secntformat[1]{%
140   \csname pre#1num\endcsname
141   \csname the#1\endcsname.\enskip
142 }
```

4.1.2 Footnotes

`\@makefn`text Redefine `\@makefn`text so that the text between the footnote symbol and the footnote text can be redefined. (It looks odd having a full stop after a symbol.)

```
143 \renewcommand*{\@makefn}{1}{%
144   \setpar
145   {%
146     \@@par
147     \@tempdima\hsize
148     \advance \@tempdima -15pt\relax
149     \parshape \@ne 15pt \@tempdima
150   }%
151   \par
152   \parindent 2em\noindent
153   \hbox to \z@ {\hss {\@thefnmark } \footnotesep\hfil }#1%
154 }
```

`\footnotesep`text The separation text between the footnote symbol and the footnote text.

```
155 \newcommand*{\footnotesep}{. }
```

`\thanks`

```
156 \renewcommand*{\thanks}[1]{%
157   \footnotemark
158   \protected@xdef\@thanks{\@thanks
159     \protect\footnotetext{#1}}%
160 }
```

4.1.3 Article abstract

This code has been taken from `jmlr2e.sty` but with `\bf` updated to `\bfseries`

`abstract`

```
161 \ifjmlrhtml
162   \renewenvironment{abstract}{\HCode{<h3>}Abstract\HCode{</h3>}}{}%
163 \else
164   \renewenvironment{abstract}
165     {\centering\large\bfseries Abstract\par}\vspace{0.7ex}%
166     \bgroup
167       \leftskip 20pt\rightskip 20pt\small\noindent\ignorespaces}%
168     {\par\egroup\vskip 0.25ex}
169 \fi
```

4.1.4 Keywords

This code has been taken from `jmlr2e.sty` but with `\bf` updated to `\bfseries`.

`keywords`

```
170 \newenvironment{keywords}
```



```

171 {\bgroup\leftskip 20pt\rightskip 20pt \small\noindent{\bfseries
172 Keywords:} \ignorespaces}%
173 {\par\egroup\vskip 0.25ex}

```

4.1.5 Title Page Information

This code has been taken from jmlr2e.sty.

Title stuff, borrowed in part from aaai92.sty

```

174 \newlength\aftertitskip \newlength\beforetitskip
175 \newlength\interauthorskip \newlength\aftermaketitskip

```

Changeable parameters.

```

176 \setlength\aftertitskip{0.1in plus 0.2in minus 0.2in}
177 \setlength\beforetitskip{0.05in plus 0.08in minus 0.08in}
178 \setlength\interauthorskip{0.08in plus 0.1in minus 0.1in}
179 \setlength\aftermaketitskip{0.3in plus 0.1in minus 0.1in}

```

`\titlebreak` Acts like new line in the paper title, but with jmlrbook acts like a space in the table of contents and bookmarks.

```

180 \newcommand*\titlebreak{\newline}

```

`\titletag`

```

181 \newcommand*\titletag[1]{}

```

`\title` Override definition of `\title` to allow for an optional argument (short title)

```

182 \renewcommand*\title[2][\@title]{%
183 \def\@shorttitle{#1}%
184 \def\@title{#2}%
185 \jmlrtitlehook
186 }

```

`\@shorttitle` The short title of the document is initialised to `\jobname` to ensure a basic document will compile even if no title is set.

```

187 \newcommand*\@shorttitle{\jobname}

```

`\jmlrtitlehook`

```

188 \newcommand*\jmlrtitlehook{}

```

`\author` Override definition of `\author` to allow for an optional argument (list of authors for page heading)

```

189 \renewcommand*\author[2][ ]{%
190 \def\@author{#2}%
191 \def\@sauthor{#1}%
192 \ifx\@sauthor\@empty
193 \else
194 \let\@shortauthor\@sauthor
195 \fi
196 \jmlrauthorhook
197 }

```

```

\jmlrauthorhook
198 \newcommand*{\jmlrauthorhook}{}

\@shortauthor
199 \newcommand*{\@shortauthor}{}

\@firstauthor
200 \newcommand*{\@firstauthor}{}

\@firstsurname
201 \newcommand*{\@firstsurname}{}

\jmlrlength
202 \newlength\jmlrlength

\jmlrmaketitle Make the title
203 \def\jmlrmaketitle{%
204   \jmlrpmaketitlehook
205   \def\@jmlr@authors@sep{, }%
206   \par
207   \begingroup

208   \def\footnoteseptext{ }%
209   \def\thempfn{\textsuperscript{\thefootnote}}%
210   \def\thefootnote{\fnsymbol{footnote}}%

211   \if@twocolumn
212     \twocolumn[\@jmlrmaketitle]%
213   \else
214     \@jmlrmaketitle
215   \fi
216   \@thanks
217 \endgroup
218 \label{jmlrstart}%
219 \ifx\@sauthor\@empty
220   \settowidth{\jmlrlength}{\@evenhead}%
221   \ifdim\jmlrlength>\textwidth
222     \def\@shortauthor{\@firstsurname\space et al.}%
223   \fi
224 \fi
225 \settowidth{\jmlrlength}{\@titlefoot}%
226 \ifdim\jmlrlength>\textwidth
227   \def\@jmlrauthors{\@firstauthor\space \emph{et al}}%
228 \fi
229 \jmlrmaketitlehook
230 \thispagestyle{jmlrtps}%
231 \setcounter{footnote}{0}%
232 \let\maketitle\relax \let\@maketitle\relax
233 \gdef\@thanks{}\gdef\@author{}\let\thanks\@gobble

```

```

234 \def\@jmlr@authors@sep{ \& }%
235 }

\jmlrmaketitlehook
236 \newcommand*\jmlrmaketitlehook{}

jmlrpremaketitlehook
237 \newcommand*\jmlrpremaketitlehook{}

Provide a different title layout for HTML

\jmlrhtmlmaketitle
238 \newcommand*\jmlrhtmlmaketitle{%
239   \ifx\@jmlr@authors\@empty
240     \sbox\jmlrbox{\let\addr\relax\@author}%
241     \fi
242     \noindent\HCode{<h2>}\@title\HCode{</h2>}
243     \noindent\@jmlr@authors
244 }

\jmlrbox Define a save box
245 \newsavebox\jmlrbox

\maketitle If we're creating HTML, set \maketitle to \jmlrhtmlmaketitle, otherwise
set it to \jmlrmaketitle
246 \ifjmlrhtml
247   \let\maketitle\jmlrhtmlmaketitle
248 \else
249   \let\maketitle\jmlrmaketitle
250 \fi

Author and editor information.
251 \def\@startauthor{\noindent \normalsize\bfseries}
252 \def\@endauthor{}
253 \def\@starteditor{\noindent \small {\bfseries \@edname:~}}
254 \def\@endeditor{\normalsize}

Provide hooks to make it easier to adapted with combine class.

\jmlrprettitle
255 \def\jmlrprettitle{\vskip\beforetitskip\begin{center}\Large\bfseries}

\jmlrposttitle
256 \def\jmlrposttitle{\par\end{center}\vskip\aftertitskip}

\nametag
257 \newcommand*\nametag[1]{}

```

\jmlrpreauthor

```
258 \def\jmlrpreauthor{%
259 \bgroup
260 \def\nametag##1{##1}%
261 \def\and{\unskip\enspace{\normalfont and}\enspace}%

262 \def\addr{\mdseries\small\itshape}%
263 \def\name{\ClassError{jmlr}{Use \string\Name{Author's Name} not \string\name}{}}%
264 \def\email{\ClassError{jmlr}{Use \string\Email{address} not \string\email}{}}%
265 \def\AND{\@endauthor\normalfont\hss \vskip \interauthorskip
266 \startauthor}%
267 \@startauthor
268 }
```

\@email

```
269 \def\@email{\hfill\small\mdseries\scshape}%
```

\@name

```
270 \def\@name{\normalsize\upshape\bfseries}%
```

\@parsename Parse a name. Appends forename to \@forenames and stores surname in \@surname.

```
271 \def\@parsename#1 #2\end@parsename{%
272 \def\@tmp{#2}%
273 \ifx\@tmp\@nnil
274 \def\@surname{#1}%
275 \let\@nextparsename\@parsenamenoop
276 \else
277 \@getinitial#1-\relax\relax\end@getinitial
278 \ifx\@forenames\@empty
279 \def\@forenames{#1}%
280 \protected@edef\@initials{\@initial}%
281 \else
282 \expandafter\toks@\expandafter{\@forenames}%
283 \edef\@forenames{\space\the\toks@}%
284 \expandafter\toks@\expandafter{\@initials}%
285 \protected@edef\@initials{\the\toks@\@initial}%
286 \fi
287 \let\@nextparsename\@parsename
288 \fi
289 \@nextparsename#2\end@parsename
290 }
291 \def\@parsenamenoop#1\end@parsename{}
```

\@getinitial

```
292 \def\@getinitial#1#2-#3#4\end@getinitial{%
293 \def\@jmlr@tmp{#3}%
294 \if\@jmlr@tmp\relax
295 \def\@initial{#1.}%
```

```

296 \else
297 \def\@initial{#1.-#3.}%
298 \fi
299 }

```

\Name Get the author's name and add surname to \@shortauthors. (Surnames with "von" parts or with spaces in should be enclosed in braces)

```

300 \newcommand*{\Name}[2][ ]{%
301 \def\@authorlist{#1}%
302 \def\@forenames{}%
303 \def\@surname{}%
304 \def\@nametag##1{%
305 \@parsename#2 \@nil\end@parsename
306 \ifx\@shortauthor\@empty
307 \ifx\@sauthor\@empty
308 \global\let\@shortauthor\@surname
309 \global\let\@firstsurname\@surname
310 \fi
311 \ifx\@authorlist\@empty
312 \protected@xdef\@jmlrauthors{\@initials\space\@surname}%
313 \else
314 \protected@xdef\@jmlrauthors{\@authorlist}%
315 \fi
316 \global\let\@firstauthor\@jmlrauthors
317 \else
318 \ifx\@sauthor\@empty
319 \expandafter\toks@\expandafter{\@shortauthor}%
320 \protected@xdef\@shortauthor{\the\toks@\space\@surname}%
321 \fi
322 \ifx\@authorlist\@empty
323 \ifx\@jmlrauthors\@empty
324 \protected@xdef\@jmlrauthors{\@initials\space\@surname}%
325 \else
326 \protected@xdef\@jmlrauthors{\@jmlrauthors
327 \noexpand\@jmlr@authors@sep
328 \@initials\space\@surname}%
329 \fi
330 \else
331 \ifx\@jmlrauthors\@empty
332 \protected@xdef\@jmlrauthors{\@authorlist}%
333 \else
334 \protected@xdef\@jmlrauthors{\@jmlrauthors
335 \noexpand\@jmlr@authors@sep
336 \@authorlist
337 }%
338 \fi
339 \fi
340 \fi
341 \def\@nametag##1{##1}%

```

```

342 \@name #2%
343 }

```

`\jmlrabbrnamelist` Display list of names in abbreviated form. (Mainly designed for use with make-jmlrbook for the preface authors.) The author should be grouped if the name contains a comma.

```

344 \newcommand*{\jmlrabbrnamelist}[1]{%
345 \def\nametag##1{%
346 \def\@jmlr@authors@sep{, }%
347 \def\@jmlr@namelist{%
348 \@for\@thisname:=#1\do{%
349 \expandafter\@jmlrabbrname\expandafter{\@thisname}%
350 \ifx\@jmlr@namelist\@empty
351 \protected@edef\@jmlr@namelist{%
352 \@initials\space\@surname
353 }%
354 \else
355 \protected@edef\@jmlr@namelist{%
356 \@jmlr@namelist
357 \noexpand\@jmlr@authors@sep
358 \@initials\space\@surname
359 }%
360 \fi
361 }%
362 \def\@jmlr@authors@sep{ \& }%
363 \@jmlr@namelist
364 }

```

`\@jmlrabbrname`

```

365 \newcommand*{\@jmlrabbrname}[1]{%
366 \def\@initials{%
367 \def\@surname{%
368 \def\@forenames{%
369 \@parsename#1 \@nil\end@parsename
370 }

```

`\Email`

```

371 \newcommand*{\Email}[1]{\@email #1}

```

`\jmlrpostauthor`

```

372 \def\jmlrpostauthor{\@endauthor\egroup
373 \par
374 \vskip \aftermaketitskip
375 \noindent
376 \ifx\@editor\@empty
377 \else
378 \@starteditor \@editor \@endeditor
379 \fi

```

```

380 \vskip \aftermaketitskip
381 }

\@jmlrmaketitle
382 \def\@jmlrmaketitle{\vbox{\hsize\textwidth
383 \linewidth\hsize
384 \jmlrprettitle
385 {%
386 \def\titletag##1{##1}%
387 \@title
388 }%
389 \jmlrposttitle
390 \jmlrpreauthor \@author \jmlrpostauthor
391 }}

\kernelmachines Convenience command
392 \newcommand*\kernelmachines{(for
393 {\textsc{http://www.kernel-machines.org}})}

\editorname Label for the editor
394 \newcommand*\editorname{Editor}

\editorsname Label for the editor
395 \newcommand*\editorsname{Editors}

\@edname This will either be Editor or Editors depending on whether \editor or \editors
is used. Defaults to \editorname
396 \let\@edname\editorname

\@editor The editor or editors are stored in \@editor
397 \def\@editor{}

\editor A single editor
398 \def\editor#1{%
399 \global\let\@edname\editorname
400 \gdef\@editor{#1}%
401 }

\editors Multiple editors
402 \def\editors#1{%
403 \global\let\@edname\editorsname
404 \gdef\@editor{#1}%
405 }

```

4.1.6 Pagestyles

This is taken from jmlr2e.sty

`\firstpageno` Set the page counter.

```
406 \def\firstpageno#1{\setcounter{page}{#1}}
```

`\startpage` If `\startpage` has been defined, use its value for the first page.

```
407 \@ifundefined{startpage}{}{\firstpageno{\startpage}}
```

Label end page.

`\@jmlrenddoc` Label end page

```
408 \newcommand*{\@jmlrenddoc}{%
409   \phantomsection
410   \protected@edef\@currentlabelname{end of \@shorttitle}%
411   \label{jmlrend}\null
412   \global\let\@reprint\@empty
413 }
```

`\@titlefoot`

```
414 \newcommand*{\@titlefoot}{\scriptsize\copyright\space\@jmlryear
415   \space\@jmlr@authors.\hfill
416   \@reprint
417 }
```

`\reprint`

```
418 \let\@reprint\@empty
419 \newcommand{\reprint}[1]{%
420   \gdef\@reprint{Reprinted with permission for JMLR#1}}
```

`\ps@jmlrtps` Title page style

```
421 \newcommand\ps@jmlrtps{%
422   \let\@mkboth\@gobbletwo
423   \def\@oddhead{\scriptsize \@jmlrproceedings
424     \ifx\@jmlrvolume\@empty
425       \else
426         \space\@jmlrvolume
427         \ifx\@jmlrissue\@empty\else(\@jmlrissue)\fi
428         \ifx\@jmlrpages\@empty
429           \ifx\@jmlryear\@empty
430             \else
431               \if\@jmlrissue\@empty,\fi
432             \fi
433           \else
434             :%
435           \fi
436         \fi
437         \ifx\@jmlrpages\@empty
```



```

438 \else
439 \ifx\@jmlrvolume\@empty\space\fi
440 \@jmlrpages
441 \ifx\@jmlryear\@empty\else,\fi
442 \fi
443 \ifx\@jmlryear\@empty\else\space\@jmlryear\fi
444 \hfill
445 \ifx\@jmlrworkshop\@empty
446 \ifx\@jmlrsubmitted\@empty
447 \else
448 Submitted \@jmlrsubmitted
449 \ifx\@jmlrpublished\@empty\else;\fi
450 \fi
451 \ifx\@jmlrpublished\@empty
452 \else
453 \space Published \@jmlrpublished
454 \fi
455 \else
456 \space\@jmlrworkshop
457 \fi
458 }%
459 \let\@evenhead\@oddhead
460 \def\@oddfoot{\@titlefoot}%
461 \let\@evenfoot\@oddfoot
462 }

```

\ps@jmlrps Page style for subsequent pages

```

463 \def\ps@jmlrps{%
464 \let\@mkboth\@gobbletwo
465 \def\@oddhead{\hfill {\small\scshape \@shorttitle} \hfill}%
466 \def\@oddfoot{\hfill \small\rmfamily \thepage \hfill}%
467 \def\@evenhead{\hfill {\small\scshape \@shortauthor} \hfill}%
468 \def\@evenfoot{\hfill \small\rmfamily \thepage \hfill}%
469 }%

```

Set the page style:

```
470 \pagestyle{jmlrps}
```

Set the heading information:

\@jmlrvolume The volume number:

```
471 \providecommand*\@jmlrvolume{}
```

\jmlrvolume

```
472 \newcommand*\@jmlrvolume[1]{\renewcommand*\@jmlrvolume{#1}}
```

\@jmlrissue The issue number:

```
473 \providecommand*\@jmlrissue{}
```

`\jmlrissue`
474 `\newcommand*{\jmlrissue}[1]{\renewcommand*{\@jmlrissue}{#1}}`

`\@jmlryear` The year of publication:
475 `\providecommand*{\@jmlryear}{}`

`\jmlryear`
476 `\newcommand*{\jmlryear}[1]{\renewcommand*{\@jmlryear}{#1}}`

`\@jmlrpages` The page range:
477 `\providecommand*\@jmlrpages{\pageref{jmlrstart}--\pageref{jmlrend}}`

`\jmlrpages`
478 `\newcommand*{\jmlrpages}[1]{\renewcommand*{\@jmlrpages}{#1}}`

`\@jmlrsubmitted` The date the article was submitted:
479 `\providecommand*\@jmlrsubmitted{}`

`\jmlrsubmitted`
480 `\newcommand*{\jmlrsubmitted}[1]{\renewcommand*{\@jmlrsubmitted}{#1}}`

`\@jmlrpublished` The date the article was published:
481 `\providecommand*\@jmlrpublished{}`

`\jmlrpublished`
482 `\newcommand*{\jmlrpublished}[1]{\renewcommand*{\@jmlrpublished}{#1}}`

`\@jmlrworkshop` The name of the workshop:
483 `\providecommand*\@jmlrworkshop{}`

`\jmlrworkshop`
484 `\newcommand*{\jmlrworkshop}[1]{\renewcommand*{\@jmlrworkshop}{#1}}`

`\@jmlrauthors`
485 `\newcommand*{\@jmlrauthors}{}`

`\@jmlr@authors`
486 `\newcommand*{\@jmlr@authors}{\@jmlrauthors}`

`\jmlrauthors` This is provided in case \Name doesn't set \@jmlrauthors correctly.
487 `\newcommand*{\jmlrauthors}[1]{\global\def\@jmlr@authors{#1}}`

4.1.7 Miscellany

This code was taken from jmlr2e.sty.

Define macros for figure captions and table titles

```
488 \def\figurecaption#1#2{\noindent\hangindent 40pt
489 \hbox to 36pt {\small\slshape #1 \hfil}
490 \ignorespaces {\small #2}}
```

Figurecenter prints the caption title centered.

```
491 \def\figurecenter#1#2{\centerline{{\slshape #1} #2}}
492 \def\figurecenter#1#2{\centerline{{\small\slshape #1} {\small #2}}}
```

Allow “hanging indents” in long captions

\@makecaption

```
493 \long\def\@makecaption#1#2{%
494 \vskip 10pt
495 \setbox\@tempboxa\hbox{#1: #2}%
496 \ifdim \wd\@tempboxa >\hsize % IF longer than one line:
497 \begin{list}{#1:}{%
498 \settowidth{\labelwidth}{#1:}
499 \setlength{\leftmargin}{\labelwidth}
500 \addtolength{\leftmargin}{\labelsep}
501 }\item #2 \end{list}\par % Output in quote mode
502 \else % ELSE center.
503 \hbox to \hsize{\hfil\box\@tempboxa\hfil}
504 \fi}
```

Define strut macros for skipping spaces above and below text in a tabular environment.

```
505 \def\abovestrut#1{\rule[0in]{0in}{#1}\ignorespaces}
506 \def\belowstrut#1{\rule[-#1]{0in}{#1}\ignorespaces}
```

\acks Acknowledgments

```
507 \long\def\acks#1{\section*{Acknowledgments}#1}
```

Research Note

\researchnote

```
508 \long\def\researchnote#1{\noindent {\LARGE\itshape Research Note} #1}
```

\set

```
509 \newcommand*\set[1]{\ensuremath{\mathcal{#1}}}
```

Convenient macros for cross-referencing.

```
510 \newcommand*\@jmlr@reflistsep}{, }
511 \newcommand*\@jmlr@reflistlastsep}{ and }
512 \newcommand*\sectionrefname}{Section}
513 \newcommand*\sectionsrefname}{Sections}
```

```

514 \newcommand*{\equationrefname}{Equation}
515 \newcommand*{\equationsrefname}{Equations}
516 \newcommand*{\tablerefname}{Table}
517 \newcommand*{\tablesrefname}{Tables}
518 \newcommand*{\figurerefname}{Figure}
519 \newcommand*{\figuresrefname}{Figures}
520 \newcommand*{\algorithmrefname}{Algorithm}
521 \newcommand*{\algorithmsrefname}{Algorithms}
522 \newcommand*{\theoremrefname}{Theorem}
523 \newcommand*{\theoremsrefname}{Theorems}
524 \newcommand*{\lemmarefname}{Lemma}
525 \newcommand*{\lemmasrefname}{Lemmas}
526 \newcommand*{\remarkrefname}{Remark}
527 \newcommand*{\remarksrefname}{Remarks}
528 \newcommand*{\corollaryrefname}{Corollary}
529 \newcommand*{\corollarysrefname}{Corollaries}
530 \newcommand*{\definitionrefname}{Definition}
531 \newcommand*{\definitionsrefname}{Definitions}
532 \newcommand*{\conjecturerefname}{Conjecture}
533 \newcommand*{\conjecturesrefname}{Conjectures}
534 \newcommand*{\axiomrefname}{Axiom}
535 \newcommand*{\axiomsrefname}{Axioms}
536 \newcommand*{\examplerefname}{Example}
537 \newcommand*{\examplesrefname}{Examples}
538 \newcommand*{\appendixrefname}{Appendix}
539 \newcommand*{\appendixsrefname}{Appendices}
540 \newcommand*{\partrefname}{Part}
541 \newcommand*{\partsrefname}{Parts}

```

`\objectref` Cross-reference a particular structural element. The first argument is the list of labels, the second argument is a control sequence containing the singular tag, the third argument a control sequence containing the plural tag, the fourth argument is text to go before the reference number, e.g. an opening bracket, and the fifth argument is text to go after the reference number, e.g. a closing bracket.

```

542 \DeclareRobustCommand*{\objectref}[5]{%
543   \let\@objectname\@empty
544   \def\@objectref{}%
545   \let\@prevsep\@empty
546   \@for\@thislabel:=#1\do{%
547     \toks@{\@prevsep}%
548     \protected@edef\@objectref{\@objectref\the\toks@
549       #4\ref{\@thislabel}#5}%
550   \ifx\@objectname\@empty
551     \let\@objectname#2% singular tag
552   \else
553     \let\@objectname#3% plural tag
554     \let\@prevsep\@jmlr@reflistsep
555   \fi

```

```

556 }%
557 \ifx\@objectname#3% plural tag
558   \let\@prevsep\@jmlr@reflistlastsep
559 \fi
560 \@objectname~\@objectref
561 }

\sectionref
562 \newcommand*\sectionref[1]{%
563   \objectref{#1}{\sectionrefname}{\sectionsrefname}{}}

\equationref
564 \newcommand*\equationref[1]{%
565   \objectref{#1}{\equationrefname}{\equationsrefname}()}

\tableref
566 \newcommand*\tableref[1]{%
567   \objectref{#1}{\tablerefname}{\tablesrefname}{}}

\figureref
568 \newcommand*\figureref[1]{%
569   \objectref{#1}{\figurerefname}{\figuresrefname}{}}

\algorithmref
570 \newcommand*\algorithmref[1]{%
571   \objectref{#1}{\algorithmrefname}{\algorithmsrefname}{}}

\theoremref
572 \newcommand*\theoremref[1]{%
573   \objectref{#1}{\theoremrefname}{\theoremsrefname}{}}

\lemmaref
574 \newcommand*\lemmaref[1]{%
575   \objectref{#1}{\lemmarefname}{\lemmasrefname}{}}

\remarkref
576 \newcommand*\remarkref[1]{%
577   \objectref{#1}{\remarkrefname}{\remarksrefname}{}}

\corollaryref
578 \newcommand*\corollaryref[1]{%
579   \objectref{#1}{\corollaryrefname}{\corollarysrefname}{}}

\definitionref
580 \newcommand*\definitionref[1]{%
581   \objectref{#1}{\definitionrefname}{\definitionsrefname}{}}

```

```

\conjectureref
582 \newcommand*{\conjectureref}[1]{%
583   \objectref{#1}{\conjecturerefname}{\conjecturesrefname}{}}{}

\axiomref
584 \newcommand*{\axiomref}[1]{%
585   \objectref{#1}{\axiomrefname}{\axiomsrefname}{}}{}

\exempleref
586 \newcommand*{\exempleref}[1]{%
587   \objectref{#1}{\exemplerefname}{\examplesrefname}{}}{}

\appendixref
588 \newcommand*{\appendixref}[1]{%
589   \objectref{#1}{\appendixrefname}{\appendixsrefname}{}}{}

\partref
590 \newcommand*{\partref}[1]{%
591   \objectref{#1}{\partrefname}{\partsrefname}{}}{}

\floatconts The first argument is the label, the second argument contains the caption (us-
ing \caption) and the third argument is the contents of the float
592 \newcommand{\floatconts}[3]{%
593   \@ifundefined{@capttype conts}{\tableconts{#1}{#2}{#3}}%
594   {\csname@capttype conts\endcsname{#1}{#2}{#3}}%
595 }

\tableconts
596 \newcommand{\tableconts}[3]{%
597   \iftablecaptiontop
598     #2\label{#1}\vskip\baselineskip
599     {\centering #3\par}%
600   \else
601     {\centering #3\par}%
602     \vskip\baselineskip
603     #2\label{#1}%
604   \fi
605 }

\figureconts
606 \newcommand{\figureconts}[3]{%
607   {\centering #3\par}%
608   \vskip\baselineskip
609   #2\label{#1}%
610 }

```

`\algocfconts`

```
611 \newcommand{\algocfconts}[3]{%
612   \@algocf@pre@ruled
613   #2\label{#1}\kern2pt\hrule height.8pt depth0pt\kern2pt%
614   #3\@algocf@pre@ruled
615 }
```

`\includeteximage` Provide a command like `\includegraphics` that includes a file containing \TeX picture code (e.g. `pgf`).

```
616 \newcommand*\includeteximage}[2][{}]{%
617   \def\Gin@req@sizes{%
618     \Gin@req@height\Gin@nat@height
619     \Gin@req@width\Gin@nat@width}%
620   \begingroup
621     \@tempwafalse
622     \let\input@path\Ginput@path
623     \toks@{\InputIfFileExists{#2}{}\@warning{File ‘#1’ not found}}}%
624     \setkeys{Gin}{#1}%
625     \Gin@esetsize
626     \the\toks@
627   \endgroup
628 }
```

`\ifprint` Provide command to check if this is the printed greyscale version or the online colour version.

```
629 \providecommand{\ifprint}[2]{\ifgrayscale#1\else#2\fi}
```

Modify `\includegraphics` so that it can pick up the greyscale version of images if this is the print version.

```
630 \ifjmlrhtml
631 \else
632   \let\@org@Gininclude@graphics\Gininclude@graphics
633   \def\Gininclude@graphics#1{%
634     \begingroup
635     \let\input@path\Ginput@path
636     \ifprint{\filename@parse{#1}-gray}}{\filename@parse{#1}}}%
637     \ifx\filename@ext\relax
638       \@for\Gin@temp:=\Gin@extensions\do{%
639         \ifx\Gin@ext\relax
640           \Gin@getbase\Gin@temp
641         \fi}%
642     \else
643       \ifprint{\filename@parse{#1}}{\}%
644       \Gin@getbase{\Gin@sepdefault\filename@ext}%
645       \ifx\Gin@ext\relax
646         \@warning{File ‘#1’ not found}%
647         \def\Gin@base{\filename@area\filename@base}%
648         \edef\Gin@ext{\Gin@sepdefault\filename@ext}%

```

```

649     \fi
650   \fi
651   \ifx\Gin@ext\relax
652     \ifprint{\@org@Gin@include@graphics{#1}}%
653     {%
654       \@latex@error{File ‘#1’ not found}%
655       {I could not locate the file with any of these extensions:^^J%
656       \Gin@extensions^^J\@ehc}%
657     }%
658   \else
659     \@ifundefined{Gin@rule@\Gin@ext}%
660     {\ifx\Gin@rule*\@undefined
661       \@latex@error{Unknown graphics extension: \Gin@ext}\@ehc
662     \else
663       \expandafter\Gin@setfile\Gin@rule*{\Gin@base\Gin@ext}%
664     \fi}%
665     {\expandafter\expandafter\expandafter\Gin@setfile
666     \csname Gin@rule@\Gin@ext\endcsname{\Gin@base\Gin@ext}}%
667   \fi
668 \endgroup}
669 \fi

```

The algorithm environment should float like a figure or table. It should use the same counter as the algorithm2e environment.

```

670 \newenvironment{algorithm}[1][htbp]%
671 {%
672   \begin{algocf}[#1]%
673   \renewcommand\@makecaption[2]{%
674     \hskip\AlCapHSkip
675     \parbox[t]{\hsize}{\algocf@captiontext{##1}{##2}}%
676   }%
677 }%
678 {%
679   \end{algocf}%
680 }

```

Set the algorithm margin to zero.

```

681 \setlength\algomargin{0pt}

```

`\artappendix` Switch to appendices in an article

```

682 \newcommand{\artappendix}{\par
683   \setcounter{section}{0}
684   \setcounter{subsection}{0}
685   \def\thesection{\Alph{section}}

686   \def\theHsection{\theHchapter.\Alph{section}}
687   \def\presectionnum{Appendix~}%
688 }

```

The default assumes a stand-alone article.

`\appendix`

```
689 \let\appendix\artappendix
```

`\booklinebreak` Provided for book production editors to fine tune the book line breaking. Does nothing in the standalone article.

```
690 \newcommand{\booklinebreak}[1] [] {}
```

4.1.8 Proofs and Theorems

This code is taken from jmlr2e.sty

`\BlackBox` End of proof marker

```
691 \newcommand{\BlackBox}{\rule{1.5ex}{1.5ex}}
```

`proof` Proof environment

```
692 \newenvironment{proof}{\par\noindent{\bfseries\upshape  
693 Proof\ }}{\hfill\BlackBox\ [2mm]}
```

Since theorem, ntheorem and amsthm all cause problems with this class, provide a simple alternative.

`\theorembodyfont` `\theorembodyfont{}`

```
694 \newcommand*{\theorembodyfont}[1]{%  
695 \renewcommand*{\@theorembodyfont}{#1}%  
696 }  
697 \newcommand*{\@theorembodyfont}{\normalfont\itshape}%
```

`\theoremheaderfont` `\theoremheaderfont{}`

```
698 \newcommand*{\theoremheaderfont}[1]{%  
699 \renewcommand*{\@theoremheaderfont}{#1}%  
700 }  
701 \newcommand*{\@theoremheaderfont}{\normalfont\bfseries }%
```

`\theoremsep` `\theoremsep{<separation code>}`

```
702 \newcommand*{\theoremsep}[1]{%  
703 \renewcommand*{\@theoremsep}{#1}%  
704 }  
705 \newcommand*{\@theoremsep}{}%
```

`\theorempostheader` `\theorempostheader{<text>}`

```

706 \newcommand*\theorempostheader[1]{%
707   \renewcommand*\@theorempostheader{#1}%
708 }
709 \newcommand*\@theorempostheader{}%
```

`\newtheorem`

```

710 \let\jmlr@org@newtheorem\newtheorem
711 \renewcommand*\@newtheorem{\@ifstar\jmlr@snewtheorem\jmlr@newtheorem}
```

Define starred version:

`\newtheorem*{<env-name>}{<title tag>}`

```

712 \newcommand*\@jmlr@snewtheorem[2]{%
713   \cslet\jmlr@thm@#1@body@font{\@theorembodyfont}%
714   \cslet\jmlr@thm@#1@header@font{\@theoremheaderfont}%
715   \cslet\jmlr@thm@#1@sep{\@theoremsep}%
716   \cslet\jmlr@thm@#1@postheader{\@theorempostheader}%
717   \newenvironment{#1}%
718   {%
719     \trivlist
720     \item
721     [%
722       \hskip\labelsep\csuse\jmlr@thm@#1@header@font#2%
723       \csuse\jmlr@thm@#1@postheader}%
724     ]%
725     \mbox{\csuse\jmlr@thm@#1@sep}%
726     \csuse\jmlr@thm@#1@body@font}%
727   }%
728   {%
729     \endtrivlist
730   }%
731 }%
732 }
```

Unstarred version needs adjusting to take the style into account:

`\@othm`

```

733 \newcommand\@jmlr@newtheorem[1]{%
734   \cslet\jmlr@thm@#1@body@font{\@theorembodyfont}%
735   \cslet\jmlr@thm@#1@header@font{\@theoremheaderfont}%
736   \cslet\jmlr@thm@#1@sep{\@theoremsep}%
737   \cslet\jmlr@thm@#1@postheader{\@theorempostheader}%
738   \jmlr@org@newtheorem{#1}%
739 }
```

`\@xthm`

```

740 \renewcommand*{\@xthm}[2]{%
741   \def\@jmlr@currenttthm{#1}%
742   \@begintheorem{#2}{\csname the#1\endcsname}%
743   \ignorespaces
744 }

```

\@ythm

```

745 \def\@ythm#1#2[#3]{%
746   \def\@jmlr@currenttthm{#1}%
747   \@opargbegintheorem{#2}{\csname the#1\endcsname}{#3}%
748   \ignorespaces
749 }

```

\@begintheorem

```

750 \renewcommand*{\@begintheorem}[2]{%
751   \ifdef{\@jmlr@currenttthm}%
752   {%
753     \letcs{\jmlr@this@theoremheader}{\jmlr@thm@\@jmlr@currenttthm @header@font}%
754     \letcs{\jmlr@this@theorembody}{\jmlr@thm@\@jmlr@currenttthm @body@font}%
755     \letcs{\jmlr@this@theoremsep}{\jmlr@thm@\@jmlr@currenttthm @sep}%
756     \letcs{\jmlr@this@theorempostheader}{%
757       {\jmlr@thm@\@jmlr@currenttthm @postheader}%
758     }%
759     {%
760       \let\jmlr@this@theorembody\@theorembodyfont
761       \let\jmlr@this@theoremheader\@theoremheaderfont
762       \let\jmlr@this@theoremsep\@theoremsep
763       \let\jmlr@this@theorempostheader\@theorempostheader
764     }%
765     \trivlist
766     \item
767     [%
768       \hskip\labelsep{\jmlr@this@theoremheader #1\ #2%
769         \jmlr@this@theorempostheader}%
770     ]%
771     \mbox{\jmlr@this@theoremsep
772       \jmlr@this@theorembody
773 }

```

\@opargbegintheorem

```

774 \renewcommand*{\@opargbegintheorem}[3]{%
775   \ifdef{\@jmlr@currenttthm}%
776   {%
777     \letcs{\jmlr@this@theoremheader}{\jmlr@thm@\@jmlr@currenttthm @header@font}%
778     \letcs{\jmlr@this@theorembody}{\jmlr@thm@\@jmlr@currenttthm @body@font}%
779     \letcs{\jmlr@this@theoremsep}{\jmlr@thm@\@jmlr@currenttthm @sep}%
780     \letcs{\jmlr@this@theorempostheader}{%
781       {\jmlr@thm@\@jmlr@currenttthm @postheader}%
782     }%

```

```

783  {%
784    \let\jmlr@this@theorembody\@theorembodyfont
785    \let\jmlr@this@theoremheader\@theoremheaderfont
786    \let\jmlr@this@theoremsep\@theoremsep
787    \let\jmlr@this@theorempostheader\@theorempostheader
788  }%
789  \trivlist
790    \item[\hspace\labelsep{\jmlr@this@theoremheader #1\ #2\ (#3)%
791      \jmlr@this@theorempostheader}]{%
792    \mbox{}\jmlr@this@theoremsep
793    \jmlr@this@theorembody
794  }

```

example

```
795 \newtheorem{example}{Example}
```

theorem

```
796 \newtheorem{theorem}{Theorem}
```

lemma

```
797 \newtheorem{lemma}[theorem]{Lemma}
```

proposition

```
798 \newtheorem{proposition}[theorem]{Proposition}
```

remark

```
799 \newtheorem{remark}[theorem]{Remark}
```

corollary

```
800 \newtheorem{corollary}[theorem]{Corollary}
```

definition

```
801 \newtheorem{definition}[theorem]{Definition}
```

conjecture

```
802 \newtheorem{conjecture}[theorem]{Conjecture}
```

axiom

```
803 \newtheorem{axiom}[theorem]{Axiom}
```

`\vec` Redefine `\vec` to produce a bold symbol

```
804 \renewcommand*{\vec}[1]{\boldsymbol{#1}}
```

`enumerate*` Define an enumerate style environment where the nested environments all use the same counter. It uses the `enumi` counter.

```
805 \newenvironment{enumerate*}%
```

```
806 {%
```

```

807 \ifnum \@enumdepth=0\relax
808 \setcounter{enumi}{0}%
809 \fi
810 \ifnum \@enumdepth>\thr@@
811 \@toodeep
812 \else
813 \advance \@enumdepth \@ne
814 \def \@enumctr{enumi}%
815 \list
816 {\labelenumi}%
817 {\@nmblisttrue\def \@listctr{enumi}%
818 \def \makelabel##1{\hss\llap{##1}}}%
819 \fi
820 }%
821 {\endlist}

```

`altdescription` Define a description like environment where the indent is computed from the widest label. The optional argument is the widest label.

```

822 \newenvironment{altdescription}[1]%
823 {\list{}%
824 {%
825 \settowidth{\labelwidth}{\altdescriptionlabel{#1}}%
826 \setlength{\labelsep}{15pt}%
827 \setlength{\leftmargin}{2\labelsep}%
828 \addtolength{\leftmargin}{\labelwidth}%
829 \setlength{\rightmargin}{\labelsep}%
830 \let \makelabel \altdescriptionlabel
831 }%
832 }%
833 {\endlist}
834
835 \newcommand*{\altdescriptionlabel}[1]{\normalfont\bfseries #1\hfill}

```

`\mailto` Syntax: `\mailto{<address>}`

```

836 \newcommand*{\mailto}[1]{\texttt{#1}}

```

The subfig package breaks `jmlrbook.cls`, so define `\subfig` here. (This is fairly primitive.)

`\c@subfigure` Define subfigure counter:

```

837 \newcounter{subfigure}
838 \@addtoreset{subfigure}{figure}

```

`\thesubfigure`

```

839 \renewcommand*{\thesubfigure}{\alph{subfigure}}

```

`\p@subfigure`

```

840 \renewcommand*{\p@subfigure}{\expandafter\p@subfigure}
841 \newcommand*{\p@subfigure}[1]{%

```

```

842 \protect\@subfigurelabel{\thefigure}{\thesubfigure}%
843 }

```

`\@subfigurelabel` Define how label appears.

```

844 \newcommand*\@subfigurelabel[2]{#1\subfigurelabel{#2}}

```

`\subfigref` Reference the sub-figure without including the figure number.

```

845 \newcommand*\subfigref[1]{%
846   {%
847     \def\@subfigurelabel##1##2{\subfigurelabel{##2}}%
848     \ref{#1}%
849   }%
850 }
851 \newcommand*\subfigref}[1]{%
852   \let\@objectname\@empty
853   \def\@objectref{}%
854   \let\@prevsep\@empty
855   \@for\@thislabel:=#1\do{%
856     \toks@{\@prevsep}%
857     \protected@edef\@objectref{\@objectref\the\toks@
858       \protect\@subfigref{\@thislabel}}%
859     \ifx\@objectname\@empty
860 \let\@objectname\@nil
861     \else
862 \let\@objectname\relax
863     \let\@prevsep\@jmlr@reflistsep
864     \fi
865   }%
866   \ifx\@objectname\relax
867     \let\@prevsep\@jmlr@reflistlastsep
868   \fi
869   \@objectref
870 }

```

`\subfigurelabel`

```

871 \newcommand*\subfigurelabel[1]{(\emph{#1})}

```

`\@subfloatcapbox` Box to store subfloat caption.

```

872 \newsavebox\@subfloatcapbox

```

`\@subfloatcontsbox` Box to store subfloat contents.

```

873 \newsavebox\@subfloatcontsbox

```

`\subfigure`

```

874 \newcommand*\subfigure[1][ ]{%
875   \bgroup
876   \def\@subfigcap{#1}%
877   \@subfigure
878 }

```

```

879 \newcommand*{\@subfigure}[2][b]{%
880   \advance\c@figure by 1\relax
881   \refstepcounter{subfigure}%
882   \sbox\@subfloatcapbox{\subfigurelabel{\thesubfigure}}%
883   \ifx\@subfigcap\@empty
884   \else
885     \space\@subfigcap
886   \fi}%
887   \sbox\@subfloatcontsbox{#2}%
888   \settowidth{\@tempdima}{\usebox\@subfloatcontsbox}%
889   \settowidth{\@tempdimb}{\usebox\@subfloatcapbox}%
890   \ifdim\@tempdimb>\@tempdima
891     \settowidth\@tempdimb{\subfigurelabel{\thesubfigure}\space}%
892     \addtolength{\@tempdima}{-\@tempdimb}%
893     \sbox\@subfloatcapbox{\subfigurelabel{\thesubfigure}\space
894       \parbox[t]{\@tempdima}{\@subfigcap}}%
895   \fi
896   \begin{tabular}[#1]{@{}c@{}}%
897     \usebox\@subfloatcontsbox\\ \usebox\@subfloatcapbox
898   \end{tabular}%
899   \egroup
900 }

```

Sub-tables:

`\c@subtable` Define subtable counter:

```

901 \newcounter{subtable}
902 \@addtoreset{subtable}{table}

```

`\thesubtable`

```

903 \renewcommand*{\thesubtable}{\alph{subtable}}

```

`\p@subtable`

```

904 \renewcommand*{\p@subtable}{\expandafter\@p@subtable}
905 \newcommand*{\@p@subtable}[1]{%
906   \protect\@subtablelabel{\thetable}{\thesubtable}}%
907 }

```

`\@subtablelabel` Define how label appears.

```

908 \newcommand*\@subtablelabel[2]{#1\subtablelabel{#2}}

```

`\subtabref` Reference the sub-table without including the table number.

```

909 \newcommand*\subtabref[1]{%
910   {%
911     \def\@subtablelabel##1##2{\subtablelabel{##2}}%
912     \ref{#1}%
913   }%
914 }
915 \newcommand*\subtabref[1]{%

```

```

916 \let\@objectname\@empty
917 \def\@objectref{}%
918 \let\@prevsep\@empty
919 \@for\@thislabel:=#1\do{%
920   \toks@{\@prevsep}%
921   \protected@edef\@objectref{\@objectref\the\toks@
922     \protect\@subtabref{\@thislabel}}}%
923   \ifx\@objectname\@empty
924 \let\@objectname\@nil
925   \else
926 \let\@objectname\relax
927   \let\@prevsep\@jmlr@reflistsep
928   \fi
929 }%
930 \ifx\@objectname\relax
931   \let\@prevsep\@jmlr@reflistlastsep
932   \fi
933 \@objectref
934 }

```

\subtablelabel

```

935 \newcommand*{\subtablelabel}[1]{(\emph{#1})}

```

\subtable

```

936 \newcommand*{\subtable}[1][]{%
937   \def\@subtabcap{#1}%
938   \@subtable
939 }

940 \newcommand*{\@subtable}[2][t]{%
941   \refstepcounter{subtable}%
942   \sbox\@subfloatcapbox{\subtablelabel{\thesubtable}}%
943   \ifx\@subtabcap\@empty
944   \else
945     \space\@subtabcap
946   \fi}%
947   \sbox\@subfloatcontsbox{#2}%
948   \settowidth{\@tempdima}{\usebox\@subfloatcontsbox}%
949   \settowidth{\@tempdimb}{\usebox\@subfloatcapbox}%
950   \ifdim\@tempdimb>\@tempdima
951     \settowidth\@tempdimb{\subtablelabel{\thesubtable}\space}%
952     \addtolength{\@tempdima}{-\@tempdimb}%
953     \sbox\@subfloatcapbox{\subtablelabel{\thesubtable}\space
954       \parbox[t]{\@tempdima}{\@subtabcap}}}%
955   \fi
956   \begin{tabular}[#1]{@{}c@{}}%
957     \usebox\@subfloatcapbox\\
958     \usebox\@subfloatcontsbox
959 }

```


4.1.9 Compatibility with combine.cls

Define chapters to make this class play nicely with combine. These definitions are just copied from book.cls

```
960 \newcounter{chapter}
961 \renewcommand\thechapter{\@arabic\c@chapter}
962 \newcommand\@chapapp{\chaptername}
```

Add sections to the chapter reset.

```
963 \@addtoreset{section}{chapter}
```

`\chaptermark`

```
964 \newcommand*\chaptermark[1]{}
```

Chapters should only be defined when we're combining documents into a book.

`\bookchapter`

```
965 \newcommand\bookchapter{%
966   \if@openright\cleardoublepage\else\clearpage\fi
967   \thispagestyle{plain}%
968   \global\@topnum\z@
969   \@afterindentfalse
970   \secdef\@chapter\@schapter}
```

`\artchapter` Disable chapters for articles.

```
971 \newcommand\artchapter{%
972   \ClassError{jmlr}{Chapters not permitted in articles}{} }
```

`\chapter` The default assumes a stand-alone document.

```
973 \let\chapter\artchapter
```

Label for the chapter entries in the toc.

```
974 \def\@chaptoclabel{chapter}
```

`\@chapter` Numbered chapters

```
975 \def\@chapter[#1]#2{\ifnum \c@secnumdepth >\m@ne
976   \refstepcounter{chapter}%
977   \if@mainmatter
978     \typeout{\@chapapp\space\thechapter.}%
979     \addcontentsline{toc}{\@chaptoclabel}%
980       {\protect\numberline{\thechapter}#1}%
981   \else
982     \addcontentsline{toc}{\@chaptoclabel}{#1}%
983   \fi
984 \else
985   \addcontentsline{toc}{\@chaptoclabel}{#1}%
986 \fi
987 \chaptermark{#1}%
```

```

988          \addtocontents{lof}{\protect\addvspace{10\p@}}%
989          \addtocontents{lot}{\protect\addvspace{10\p@}}%
990          \if@twocolumn
991             \topnewpage[\@makechapterhead{#2}]%
992          \else
993             \@makechapterhead{#2}%
994             \@afterheading
995          \fi}

```

`\chaptertitleformat` Formats the chapter title

```

996 \newcommand{\chaptertitleformat}[1]{%
997   \Huge\bfseries \@chapapp\space#1\par\nobreak
998 }

```

`\chapternumberformat` Formats the chapter number

```

999 \newcommand{\chapternumberformat}[1]{%
1000   \huge\bfseries \@chapapp\space#1\par\nobreak
1001   \vskip 20\p@
1002 }

```

`\chapterformat` Overall format for chapter headings

```

1003 \newcommand*{\chapterformat}{\raggedright}

```

`\postchapterskip` Vertical gap after chapter heading

```

1004 \newlength\postchapterskip
1005 \setlength\postchapterskip{40pt}

```

`\prechapterskip` Vertical gap before chapter heading

```

1006 \newlength\prechapterskip
1007 \setlength\prechapterskip{50pt}

```

`\@makechapterhead` Chapter heading for numbered chapters

```

1008 \def\@makechapterhead#1{%
1009   \null\vskip\prechapterskip
1010   {\parindent \z@ \normalfont\chapterformat
1011     \ifnum \c@secnumdepth >\m@ne
1012       \if@mainmatter
1013         \chapternumberformat{\thechapter}%
1014       \fi
1015     \fi
1016     \interlinepenalty\@M
1017     \chaptertitleformat{#1}\par\nobreak
1018     \vskip \postchapterskip
1019   }}

```

`\@schapter` Unnumbered chapters.

```

1020 \def\@schapter#1{\if@twocolumn
1021   \topnewpage[\@makeschapterhead{#1}]%

```

```

1022             \else
1023             \@makeschapterhead{#1}%
1024             \@afterheading
1025             \fi}

```

`\@makeschapterhead` Layout for unnumbered chapter headings

```

1026 \def\@makeschapterhead#1{%
1027   \vspace*{\prechapterskip}%
1028   {\parindent \z@
1029     \normalfont\chapterformat
1030     \interlinepenalty\@M
1031     \chaptertitleformat{#1}\par\nobreak
1032     \vskip \postchapterskip
1033   }}

```

`\l@chapter` Format for chapter entry in toc

```

1034 \newcommand*\l@chapter[2]{%
1035   \ifnum \c@tocdepth >\m@ne
1036     \addpenalty{-\@highpenalty}%
1037     \vskip 1.0em \@plus\p@
1038     \setlength\@tempdima{1.5em}%
1039     \begingroup
1040       \parindent \z@ \rightskip \@pnumwidth
1041       \parfillskip -\@pnumwidth
1042       \leavevmode \large\bfseries
1043       \advance\leftskip\@tempdima
1044       \hskip -\leftskip
1045       #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
1046       \penalty\@highpenalty
1047     \endgroup
1048   \fi}

```

`\l@appendix` Make appendix entries in the toc the same as that for chapters by default

```

1049 \let\l@appendix\l@chapter

```

`\chaptername`

```

1050 \newcommand\chaptername{Chapter}

```

`\frontmatter` Start the front matter (in book)

```

1051 \newcommand\frontmatter{%
1052   \cleardoublepage
1053   \@mainmatterfalse
1054   \renewcommand*\theHchapter{front-\thechapter}%
1055   \pagenumbering{roman}%
1056   \morefrontmatter
1057 }
1058 \newcommand\morefrontmatter{}

```

`\mainmatter` Start the main matter (in book)

```
1059 \newcommand\mainmatter{%
1060   \cleardoublepage
1061   \@mainmattertrue
1062   \setcounter{chapter}{0}%
1063   \renewcommand*\theHchapter{\thechapter}%
1064   \pagenumbering{arabic}%
1065   \moremainmatter
1066 }
1067 \newcommand\moremainmatter{}
```

`\backmatter` Start the back matter (in book)

```
1068 \newcommand\backmatter{%
1069   \if@openright
1070     \cleardoublepage
1071   \else
1072     \clearpage
1073   \fi
1074   \@mainmatterfalse}
```

`\booktocpreamble`

```
1075 \newcommand*\booktocpreamble{}
```

`\booktocpostamble`

```
1076 \newcommand*\booktocpostamble{}
```

`\booktableofcontents` This is for the main table of contents when using the combine class file, and is not for use in individual articles.

```
1077 \newcommand\booktableofcontents{%
1078   \if@twocolumn
1079     \@restonecoltrue\onecolumn
1080   \else
1081     \@restonecolfalse
1082   \fi
1083   \chapter*\contentsname
1084   \@mkboth{\MakeUppercase\contentsname}{\MakeUppercase\contentsname}}%
1085   \booktocpreamble
1086   \@starttoc{toc}%
1087   \booktocpostamble
1088   \if@restonecol
1089     \twocolumn
1090   \else
1091     \clearpage
1092   \fi
1093   \@mkboth{}{}%
1094 }
```

`\arttableofcontents` Table of contents for individual articles.

```
1095 \let\arttableofcontents\tableofcontents
```

`\artpart` A part in an article

```
1096 \newcommand{\artpart}{%  
1097   \def\toclevel@part{0}%  
1098   \if@noskipsec \leavevmode\fi  
1099   \par  
1100   \addvspace{4ex}%  
1101   \@afterindentfalse  
1102   \secdef\@artpart\@sartpart  
1103 }  
1104 \let\@artpart\@part  
1105 \let\@sartpart\@spart
```

`\bookpart` A part in a book forming a collection of articles

```
1106 \newcommand\bookpart{%  
1107   \def\toclevel@part{-1}%  
1108   \if@openright  
1109     \cleardoublepage  
1110   \else  
1111     \clearpage  
1112   \fi  
1113   \thispagestyle{plain}%  
1114   \if@twocolumn  
1115     \onecolumn  
1116     \@tempswattrue  
1117   \else  
1118     \@tempswafalse  
1119   \fi  
1120   \preparthook  
1121   \secdef\@bookpart\@sbookpart}
```

`\parttitleformat` Format of the title for a part (in a book)

```
1122 \newcommand{\parttitleformat}[1]{%  
1123   \Huge\bfseries#1%  
1124 }
```

Part labels

```
1125 \newcommand*{\@parttoclabel}{part}
```

`\@partapp`

```
1126 \def\@partapp{\partname}
```

`\partnumberformat` Format of the part number (in a book)

```
1127 \newcommand{\partnumberformat}[1]{%  
1128   \Huge\bfseries \@partapp\nobreakspace#1\par\nobreak  
1129   \vskip 20\p@  
1130 }
```

`\preparthook` Hook at the start of a part (in a book)

```
1131 \newcommand{\preparthook}{\null\vfil}
```

`\partformat` Overall format of part

```
1132 \newcommand*{\partformat}{\centering}
```

`\@bookpart` Numbered book part format

```
1133 \def\@bookpart[#1]#2{%
1134     \ifnum \c@secnumdepth >-2\relax
1135         \refstepcounter{part}%
1136         \addcontentsline{toc}{\@parttoclabel}{\protect\numberline{\thepart}#1}%
1137     \else
1138         \addcontentsline{toc}{\@parttoclabel}{#1}%
1139     \fi
1140     \markboth{}{}%
1141     {\interlinepenalty \@M
1142     \normalfont\partformat
1143     \ifnum \c@secnumdepth >-2\relax
1144         \partnumberformat{\thepart}%
1145     \fi
1146     \parttitleformat{#2}\par}%
1147     \postparthook}
```

`\@sbookpart` Unnumbered book part format

```
1148 \def\@sbookpart#1{%
1149     {\interlinepenalty \@M
1150     \normalfont\partformat
1151     \parttitleformat{#1}\par}%
1152     \postparthook}
```

`\postparthook` Hook after part heading

```
1153 \def\postparthook{\vfil\newpage
1154     \if@twoside
1155     \if@openright
1156         \null
1157         \thispagestyle{empty}%
1158     \newpage
1159     \fi
1160     \fi
1161     \if@tempwa
1162         \twocolumn
1163     \fi}
```

`\bookappendix` Switch to appendices in book

```
1164 \newcommand\bookappendix{\par
1165     \setcounter{table}{0}%
1166     \setcounter{figure}{0}%
1167     \zeroextracounters}
```

```

1168 \par
1169 \gdef\theHchapter{\Alph {chapter}}%
1170 \xdef\Hy@chapapp{\Hy@appendixstring}%
1171 \setcounter{chapter}{0}%
1172 \setcounter{section}{0}%
1173 \gdef\@chapapp{\appendixname}%
1174 \gdef\thechapter{\@Alph\c@chapter}%
1175 \def\@write@jmlr@import{\@write@jmlr@apdimport}%
1176 \csname appendixmore\endcsname
1177 }

```

Define commands to switch between book/article modes

\jmlrbookcommands Switch to book commands

```

1178 \newcommand*\jmlrbookcommands{%
1179 \let\part\bookpart
1180 \let\chapter\bookchapter
1181 \let\appendix\bookappendix
1182 \let\tableofcontents\booktableofcontents
1183 \def\thesection{\thechapter.\arabic{section}}%
1184 }

```

\jmlrarticlecommands Switch to article commands

```

1185 \newcommand*\jmlrarticlecommands{%
1186 \let\part\artpart
1187 \let\chapter\artchapter
1188 \let\appendix\artappendix
1189 \let\tableofcontents\arttableofcontents
1190 \def\thesection{\arabic{section}}%
1191 }

```

Check for packages that are known to cause problems when combining articles into a book.

\jmlr@check@packages

```

1192 \newcommand*\jmlr@check@packages{%
1193 \@ifpackageloaded{epsfig}{%
1194 \ClassError{jmlr}{Obsolete package ‘epsfig’ detected.
1195 \MessageBreak
1196 Please use \string\includegraphics\space to include images
1197 instead}{}}}%
1198 \@ifpackageloaded{psfig}{%
1199 \ClassError{jmlr}{Obsolete package ‘psfig’ detected.
1200 \MessageBreak
1201 Please use \string\includegraphics\space to include images
1202 instead}{}}}%
1203 \@ifpackageloaded{subfig}{%
1204 \ClassError{jmlr}{Package ‘subfig’ detected.\MessageBreak
1205 This will cause a conflict if the article is incorporated

```

```

1206 \MessageBreak
1207 into a book using jmlbook.cls.
1208 \MessageBreak
1209 Please use \string\subfigure\space and
1210 \string\subtable\space instead}{}}{}%
1211 \@ifpackageloaded{theorem}{%
1212 \ClassError{jmlr}{Package ‘theorem’ detected.\MessageBreak
1213 This can cause a conflict with other packages used by jmlr}{}}{}%
1214 \@ifpackageloaded{ntheorem}{%
1215 \ClassError{jmlr}{Package ‘ntheorem’ detected.\MessageBreak
1216 This can cause a conflict with other packages used by jmlr}{}}{}%
1217 \@ifpackageloaded{amsthm}{%
1218 \ClassError{jmlr}{Package ‘amsthm’ detected.\MessageBreak
1219 This package conflicts with the jmlr class}{}}{}%
1220 \@ifpackageloaded{pdfpages}{Package ‘pdfpages’ detected.\MessageBreak
1221 This can cause a problem for jmlrbook.}}{}%
1222 \@ifpackageloaded{geometry}{Package ‘geometry’ detected.\MessageBreak
1223 This can cause a problem for jmlrbook.}}{}%
1224 \@ifpackageloaded{tabularx}{%
1225 \ClassError{jmlr}{Package ‘tabularx’ detected.\MessageBreak
1226 This will break footnote links.}}{}{}%
1227 }
1228 \AtBeginDocument{%
1229 \@jmlr@check@packages
1230 \let\@jmlr@check@packages\relax
1231 }

```

`\suppressPackageChecks` Don't check for potentially problematic packages. (If I find this in any paper sent to me for inclusion in a book, it will annoy me.)

```

1232 \newcommand*{\jmlrSuppressPackageChecks}{%
1233 \let\@jmlr@check@packages\relax
1234 }

```

Discourage authors from using obsolete commands:

`\obsoletefontcs`

```

1235 \DeclareRobustCommand*{\obsoletefontcs}[1]{%
1236 \ClassWarning{jmlr}{Obsolete command
1237 \expandafter\string\csname#1\endcsname\space detected}%
1238 \csname #1 \endcsname
1239 }

```

`\bf`

```

1240 \renewcommand*{\bf}{%
1241 \obsoletefontcs{bf}%
1242 }

```

`\it`

```

1243 \renewcommand*{\it}{%

```



```

1244 \obsoletefontcs{it}%
1245 }

\sc
1246 \renewcommand*{\sc}{%
1247 \obsoletefontcs{sc}%
1248 }

\rm
1249 \renewcommand*{\rm}{%
1250 \obsoletefontcs{rm}%
1251 }

\sf
1252 \renewcommand*{\sf}{%
1253 \obsoletefontcs{sf}%
1254 }

\tt
1255 \renewcommand*{\tt}{%
1256 \obsoletefontcs{tt}%
1257 }

```

4.2 jmlrbook.cls Code

Class file for books composed of articles using the jmlr class.

```
1258 \NeedsTeXFormat{LaTeX2e}
```

Declare class:

```
1259 \ProvidesClass{jmlrbook}[2014/09/29 v1.19 (NLCT) JMLR Book Style]
```

Need xkeyval package to have key=value class options

```
1260 \RequirePackage{xkeyval}
```

Requires double spacing for the title page

```
1261 \RequirePackage{setspace}
```

Requires fink package to determine if the preface is in the main document or in a separate file.

```
1262 \RequirePackage{fink}
```

Some packages need to be loaded before hyperref so provide a hook to do this:

```
1263 \providecommand*\jmlrprehyperref{}
```

\ifgrayscale Determine whether to select color or grayscale

```
1264 \newif\ifgrayscale
```

```
1265 \grayscalefalse
```

draft

```
1266 \DeclareOptionX{draft}{\setlength\overfullrule{5pt}}
```

final
1267 \DeclareOptionX{final}{\setlength\overfullrule{0pt}}

color
1268 \DeclareOptionX{color}{\grayscalefalse}

gray
1269 \DeclareOptionX{gray}{\grayscaletrue}

Pass letterpaper and 7x10 to jmlr.

letterpaper
1270 \DeclareOptionX{letterpaper}{\PassOptionsToClass{\CurrentOption}{jmlr}}

7x10
1271 \DeclareOptionX{7x10}{\PassOptionsToClass{\CurrentOption}{jmlr}}

Pass html and nohtml to jmlr. (Used by makejmlrbookgui)

html
1272 \DeclareOptionX{html}{\PassOptionsToClass{\CurrentOption}{jmlr}}

nohtml
1273 \DeclareOptionX{nohtml}{\PassOptionsToClass{\CurrentOption}{jmlr}}

Pass wcp and nowcp options to jmlr.

wcp
1274 \DeclareOptionX{wcp}{\PassOptionsToClass{\CurrentOption}{jmlr}}

nowcp
1275 \DeclareOptionX{nowcp}{\PassOptionsToClass{\CurrentOption}{jmlr}}

Pass tablecaptiontop and tablecaptionbottom options to jmlr.

tablecaptiontop
1276 \DeclareOptionX{tablecaptiontop}{\PassOptionsToClass{\CurrentOption}{jmlr}}

tablecaptionbottom
1277 \DeclareOptionX{tablecaptionbottom}{\PassOptionsToClass{\CurrentOption}{jmlr}}

Pass font size commands to jmlr

10pt
1278 \DeclareOptionX{10pt}{\PassOptionsToClass{\CurrentOption}{jmlr}}

11pt
1279 \DeclareOptionX{11pt}{\PassOptionsToClass{\CurrentOption}{jmlr}}

12pt

```
1280 \DeclareOptionX{12pt}{\PassOptionsToClass{\CurrentOption}{jmlr}}
```

pdfxa

```
1281 \define@boolkey{jmlrbook.cls}{jmlr}{pdfxa}[true]{}
1282 \jmlrpdfxafalse
```

Process options

```
1283 \ProcessOptionsX
```

If `\jmlrgrayscale` has been defined, let it override the class options. If it is defined, it should be set to 0 for the online version and any other number for the grayscale print version.

```
1284 \@ifundefined{jmlrgrayscale}{}%
1285 {%
1286   \ifnum\jmlrgrayscale=0\relax
1287     \grayscalefalse
1288   \else
1289     \grayscaletrue
1290   \fi
1291 }
```

This next bit is a modification of pdfx. It's only used for the print version when the pdfxa option is used.

```
1292 \newcommand*{\jmlrwritepdfinfo}{%
1293   \protected@write\@auxout{}{\string\jmlrbook@info{\xmpAuthor}{\xmpTitle}}%
1294 }
1295 \ifgrayscale
1296   \ifjmlrpdfxa
1297     \def\convertDate{\getYear}
1298     {\catcode'\D=12
1299      \gdef\getYear D:#1#2#3#4{\edef\xYear{#1#2#3#4}\getMonth}
1300     }
1301     \def\getMonth#1#2{\edef\xMonth{#1#2}\getDay}
1302     \def\getDay#1#2{\edef\xDay{#1#2}\getHour}
1303     \def\getHour#1#2{\edef\xHour{#1#2}\getMin}
1304     \def\getMin#1#2{\edef\xMin{#1#2}\getSec}
1305     \def\getSec#1#2{\edef\xSec{#1#2}\getTZ}
1306     {%
1307       \catcode'\Z=12
1308       \gdef\tmpz{Z}
1309     }
1310     \def\hash{\expandafter\@gobble\string\#}%
1311     \def\amp{\expandafter\@gobble\string\&%}
1312     \def\xmpAmp{\amp\hash x0026;}%
1313     \def\sep{</rdf:li><rdf:li>}
1314     \def\TextCopyright{\amp\hash x00A9;}
1315     \def\Title#1{\gdef\xmpTitle{#1}}
1316     \let\xmpTitle\@empty
```

```

1317 \def\Author#1{\gdef\xmpAuthor{#1}}
1318 \let\xmpAuthor\@empty
1319 \def\Keywords#1{\gdef\xmpKeywords{#1}}
1320 \let\xmpKeywords\@empty
1321 \let\xmpSubject\xmpKeywords
1322 \def\Creator#1{\gdef\xmpCreator{#1}}
1323 \def\xmpCreator{\pdfcreator}
1324 \def\Producer#1{\gdef\xmpProducer{#1}}
1325 \def\xmpProducer{pdfTeX}
1326 \def\Volume#1{\gdef\xmpVolume{#1}}
1327 \let\xmpVolume\@empty
1328 \def\Issue#1{\gdef\xmpIssue{#1}}
1329 \let\xmpIssue\@empty
1330 \def\CoverDisplayDate#1{\gdef\xmpCoverDisplayDate{#1}}
1331 \let\xmpCoverDisplayDate\@empty
1332 \def\CoverDate#1{\gdef\xmpCoverDate{#1}}
1333 \let\xmpCoverDate\@empty
1334 \def\Copyright#1{\gdef\xmpCopyright{#1}}
1335 \let\xmpCopyright\@empty
1336 \def\Doi#1{\gdef\xmpDoi{#1}}
1337 \let\xmpDoi\@empty
1338 \def\Lastpage#1{\gdef\xmpLastpage{#1}}
1339 \let\xmpLastpage\@empty
1340 \def\Firstpage#1{\gdef\xmpFirstpage{#1}}
1341 \let\xmpFirstpage\@empty
1342 \def\Journaltitle#1{\gdef\xmpJournaltitle{#1}}
1343 \let\xmpJournaltitle\@empty
1344 \def\Journalnumber#1{\gdef\xmpJournalnumber{#1}}
1345 \let\xmpJournalnumber\@empty
1346 \def\Org#1{\gdef\xmpOrg{#1}}
1347 \let\xmpOrg\@empty
1348 \def\CreatorTool#1{\gdef\xmpCreatorTool{#1}}
1349 \def\xmpCreatorTool{\xmpProducer}
1350 \def\AuthoritativeDomain#1{\gdef\xmpAuthoritativeDomain{#1}}
1351 \let\xmpAuthoritativeDomain\@empty
1352 \def\findUUID#1{\edef\tmpstring{\pdfmdfivesum{#1}}
1353 \expandafter\eightofnine\tmpstring\end}
1354 \def\eightofnine#1#2#3#4#5#6#7#8#9\end{%
1355 \xdef\eightchars{#1#2#3#4#5#6#7#8}
1356 \fouroffive#9\end}
1357 \def\fouroffive#1#2#3#4#5\end{\xdef\ffourchars{#1#2#3#4}
1358 \sfouroffive#5\end}
1359 \def\sfouroffive#1#2#3#4#5\end{\xdef\sfourchars{#1#2#3#4}
1360 \tfouroffive#5\end}
1361 \def\tfouroffive#1#2#3#4#5\end{\xdef\tfourchars{#1#2#3#4}
1362 \xdef\laststring{#5}}
1363 \def\uuid{\eightchars-%
1364 \ffourchars-%
1365 \sfourchars-%

```

```

1366         \tfourchars-%
1367         \laststring}

```

`\getTZh` This is a modification of the command from pdfx that also works for zero and negative hours.

```

1368 \def\getTZh#1{%
1369     \def\TZprefix{#1}%
1370     \ifx\TZprefix\tmpz
1371         \def\xTZsign{+}%
1372     \def\xTZh{00}%
1373     \def\xTZm{00}%
1374     \let\getTZnext\doConvDate
1375 \else
1376     \let\xTZsign\TZprefix
1377     \let\getTZnext\getTZhm
1378 \fi
1379 \getTZnext
1380 }

```

`\getTZm` This is a modified version of the command from pdfx.

```

1381 \def\getTZhm#1#2'#3#4'{%
1382     \edef\xTZh{#1#2}%
1383     \edef\xTZm{#3#4}%
1384     \doConvDate
1385 }

```

`\doConvDate` Defines the date using information derived from parsing `\pdfcreationdate`

```

1386 \def\doConvDate{%
1387     \edef\convDate{\xYear-\xMonth-\xDay
1388         T\xHour:\xMin:\xSec\xTZsign\xTZh:\xTZm}%
1389 }

```

`\@pre@hyperref` This macro contains a trimmed down version of pdfx.

```

1390 \newcommand{\@pre@hyperref}{%
1391     \IfFileExists{FOGRA39L.icc}%
1392     {%
1393         \pdfminorversion=3
1394         \pdfpageattr{/MediaBox[0 0 595 793]
1395             /BleedBox[0 0 595 793]
1396             /TrimBox[25 20 570 773]}%
1397         \findUUID{\jobname.pdf}%
1398         \edef\xmpdocid{\uuid}%
1399         \findUUID{\pdfcreationdate}%
1400         \edef\xmpinstid{\uuid}%
1401         \InputIfFileExists{\jobname.xmpdata}{-}{-}%
1402         \RequirePackage{xmpincl}%
1403         \expandafter\convertDate\pdfcreationdate
1404         \def\@pctchar{\expandafter\@gobble\string\}%
1405         \def\@bchar{\expandafter\@gobble\string\}

```

```

1406 \immediate\pdfobj stream attr{/N 4} file{FOGRA39L.icc}
1407 \edef\OBJ@CVR{\the\pdflastobj}
1408 \pdfcatalog{/OutputIntents [ <<
1409 /Type/OutputIntent
1410 /S/GTS_PDFX
1411 /OutputCondition (FOGRA39)
1412 /OutputConditionIdentifier (FOGRA39 \@bchar(ISO Coated v2
1413 300\@pctchar\space \@bchar(ECI\@bchar)\@bchar))
1414 /DestOutputProfile \OBJ@CVR\space 0 R
1415 /RegistryName(http://www.color.org)
1416 >> ]}
1417 \input glyptounicode.tex
1418 \input glyptounicode-cmr.tex
1419 \pdfgentounicode=1
1420 \RequirePackage[draft,pdftex,pdfpagemode=UseNone,bookmarks=false]{hyperref}%
1421 }%
1422 {%
1423 \ClassError{jmlrbook}{Can't find 'FOGRA39L.icc'}%
1424 {Download ISOcoated\string_v2\string_330\string_bas.icc from
1425 http://www.colormangement.org/en/isoprofile.html
1426 Rename it FOGRA39L.icc and put it in the pdfx folder}%
1427 }%
1428 }
1429 \renewcommand*{\jmlrwritepdfinfo}{%
1430 \begingroup
1431 \let\&=\xmpAmp
1432 \IfFileExists{pdfx-1a.xmp}{%
1433 \pdfcompresslevel=0
1434 \immediate\pdfobj stream attr {/Type /Metadata /Subtype /XML}
1435 file{pdfx-1a.xmpi}
1436 \pdfcatalog{/Metadata \the\pdflastobj\space 0 R}
1437 }%
1438 }%
1439 \endgroup
1440 \protected@write\@auxout{}{\string\jmlrbook@info{\xmpAuthor}{\xmpTitle}}%
1441 \pdfinfo{
1442 /Author(\xmpAuthor)%
1443 /Title(\xmpTitle)%
1444 /Creator(\xmpProducer)%
1445 /CreationDate(\convDate)%
1446 /ModDate(\convDate)%
1447 /Producer(\xmpProducer)%
1448 /Trapped /False
1449 /GTS_PDFXVersion (PDF/X-1:2001)%
1450 /GTS_PDFXConformance (PDF/X-1a:2001)%
1451 }%
1452 }
1453 \fi
1454 \fi

```

\jmlrbook@info Not needed (information provided for MakeJmlrBookGUI)

```
1455 \newcommand*{\jmlrbook@info}[2] {}
```

\@post@hyperref

```
1456 \newcommand*{\@post@hyperref}{%
1457   \let\@org@c@lenddoca\c@lenddoca
1458   \let\c@lenddoca\undefined
1459 }
```

Load combine class. This requires a little bit of trickery.

```
1460 \let\@org@LoadClass\LoadClass
1461 \def\LoadClass#1{\let\LoadClass\@org@LoadClass\@org@LoadClass{jmlr}}
1462 \@org@LoadClass{combine}
1463 \let\c@lenddoca\@org@c@lenddoca
```

Requires combnat to work with natbib:

```
1464 \RequirePackage{combnat}
```

Need to apply a patch to combnat (this has now been fixed in combnat, but user might be using an old version):

```
1465 \renewcommand\c@laNAT@parse[1]{%
1466   \let\protect=\@unexpandable@protect\let~\relax
1467   \let\active@prefix=\@gobble
1468   \xdef\NAT@temp{\csname b@#1\@extra@b@citeb\endcsname}}%
1469   \expandafter\NAT@split\NAT@temp?????@%
1470   \expandafter\NAT@parse@date\NAT@date?????@%
1471   \ifciteindex\NAT@index\fi}
1472
1473 \renewcommand\c@lbNAT@parse[1]{%
1474   \let\protect=\@unexpandable@protect\let~\relax
1475   \let\active@prefix=\@gobble
1476   \xdef\NAT@temp{\csname B?\jobname?@#1\@extra@b@citeb\endcsname}}%
1477   \expandafter\NAT@split\NAT@temp?????@%
1478   \expandafter\NAT@parse@date\NAT@date?????@%
1479   \ifciteindex\NAT@index\fi}
```

Switch on two-side mode

```
1480 \@twosidetrue
```

Start new chapters on the right hand page:

```
1481 \newif\if@openright
1482 \@openrighttrue
1483 \newif\if@mainmatter
```

Define commands that affect the formatting:

\pagerule Draw line across the text block.

```
1484 \newcommand*{\pagerule}[1][0pt]{\par\noindent
1485   \rule[#1]{\linewidth}{2pt}\par}
```

preface The preface environment starts a new chapter but also writes information to the main aux file for makejmlrbook. The optional argument is the file name for the extracted preface.

```

1486 \ifjmlrhtml
1487   \newenvironment{preface}[1][preface]%
1488   {%
1489     \noindent\HCode{<h2>\prefacename</h2>}%
1490   }%
1491   {%
1492   }
1493 \else
1494   \newenvironment{preface}[1][preface]%
1495   {%

```

The preface should be in the front matter, so the chapter numbering should automatically be suppressed.

```

1496     \chapter{\prefacename}
1497     \protected@write\@mainauxout
1498       {}{\string\@prefacestart{\thepage}{\arabic{page}}}%
1499     \protected@write\@mainauxout{}{\string\@prefacefile{\finkpath}{#1}}%
1500   }%
1501   {%
1502     \protected@write\@mainauxout{}{\string\@prefaceend{\thepage}}%
1503   }
1504 \fi

```

\prefacename

```

1505 \newcommand*{\prefacename}{Preface}

```

\@prefacefile

```

1506 \newcommand*{\@prefacefile}[2]{}

```

\@prefacestart

```

1507 \newcommand*{\@prefacestart}[2]{}

```

\@prefaceend

```

1508 \newcommand*{\@prefaceend}[1]{}

```

\@prefaceeditor

```

1509 \newcommand*{\@prefaceeditor}[1]{}

```

Cross-reference chapters:

```

1510 \newcommand*{\chapterrefname}{Chapter}
1511 \newcommand*{\chaptersrefname}{Chapters}

```

\chapterref

```

1512 \newcommand*{\chapterref}[1]{%
1513   \objectref{#1}{\chapterrefname}{\chaptersrefname}{}}

```


Cross-referencing imported articles:

`\articlepageref` Page number of start of article

```
1514 \newcommand*{\articlepageref}[1]{%
1515   \pageref{#1jmlrstart}%
1516 }
```

`\articlepagesref` Page range of article

```
1517 \newcommand*{\articlepagesref}[1]{%
1518   \pageref{#1jmlrstart}--\pageref{#1jmlrend}%
1519 }
```

`\@articlepagesref` Page range of article for use within the article

```
1520 \newcommand*{\@articlepagesref}{%
1521   \pageref{jmlrstart}--\pageref{jmlrend}%
1522 }
```

`\articletitleref` Reference the short title of an imported article

```
1523 \newcommand*{\articletitleref}[1]{\nameref{#1jmlrstart}}
```

`\articleauthorref` Reference the authors of an imported article

```
1524 \newcommand*{\articleauthorref}[1]{%
1525   \@ifundefined{@jmlr@author@#1}%
1526   {%
1527     \ClassWarning{jmlrbook}{Label ‘#1’ undefined}%
1528   }%
1529   {%
1530     \@nameuse{@jmlr@author@#1}%
1531   }%
1532 }
```

Extra title information

```
1533 \renewcommand*jmlrtitlehook{%
1534   \hypersetup{pdftitle={\@shorttitle}}%
1535   \let\xmpTitle\@shorttitle
1536   \let*jmlrtitlehook\relax
1537 }
1538 \renewcommand*jmlrauthorhook{%
1539   \ifx\@sauthor\@empty
1540     \hypersetup{pdfauthor={\@author}}%
1541   \else
1542     \hypersetup{pdfauthor={\@sauthor}}%
1543   \fi
1544   \let\xmpAuthor\@sauthor
1545   \let*jmlrauthorhook\relax
1546   \let\@shortauthor\@empty
1547 }
```

\subtitle

```
1548 \newcommand*{\@subtitle}{}  
1549 \newcommand*{\subtitle}[1]{\renewcommand*{\@subtitle}{#1}}
```

\volume

```
1550 \newcommand*{\@volume}{\@jmlrvolume}  
1551 \newcommand*{\volume}[1]{%  
1552   \renewcommand*{\@volume}{#1}%  
1553   \ifjmlrpdfxa  
1554     \let\xmpVolume\@volume  
1555   \fi  
1556 }
```

\jmlrissue

```
1557 \newcommand*{\@issue}{\@jmlrissue}  
1558 \newcommand*{\issue}[1]{%  
1559   \renewcommand*{\@issue}{#1}%  
1560   \ifjmlrpdfxa  
1561     \let\xmpIssue\@issue  
1562   \fi  
1563 }
```

\thejmlrworkshop Provided in the event that it's required for the title page.

```
1564 \newcommand*{\thejmlrworkshop}{\@jmlrworkshop}
```

\team

```
1565 \newcommand*{\@team}{}  
1566 \newcommand*{\team}[1]{\renewcommand*{\@team}{#1}}
```

roductioneditorname

```
1567 \newcommand*{\@productioneditorname}{Production Editor}
```

\productioneditor

```
1568 \newcommand*{\@productioneditor}{}  
1569 \newcommand*{\productioneditor}[1]{%  
1570   \renewcommand*{\@productioneditor}{#1}%  
1571   \renewcommand*{\@productioneditorname}{Production Editor}%  
1572 }
```

\productioneditors

```
1573 \newcommand*{\productioneditors}[1]{%  
1574   \renewcommand*{\@productioneditor}{#1}%  
1575   \renewcommand*{\@productioneditorname}{Production Editors}%  
1576 }
```

\logo Title page image

```
1577 \newcommand*{\@logo}{}  
1578 \newcommand*{\logo}[2][ ]{%
```

```

1579 \ifjmlrhtml
1580   \def\@logo@tmp{#1}%
1581   \ifx\@logo@tmp\@empty
1582     \renewcommand*{\@logo}{#2}%
1583   \else
1584     \renewcommand*{\@logo}{\HCode{<a href="#1">}#2\HCode{</a>}}%
1585   \fi
1586 \else
1587   \renewcommand*{\@logo}{#2}%
1588 \fi
1589 }

```

`\booklinebreak` Provided for book production editors to fine tune the book line breaking.

```
1590 \renewcommand*{\booklinebreak}[1][4]{\linebreak[#1]}
```

Set article title

```
1591 \def\c@lbmaketitle{\jmlrmaketitle}
```

The book's title:

`\maintitle`

```
1592 \newcommand*{\maintitle}{}%
```

Make it easier to modify the book's title page:

`\SetTitleElement`

```

1593 \newcommand*{\SetTitleElement}[3]{%
1594   {%
1595     \expandafter\ifx\csname @#1\endcsname\@empty
1596     \else
1597       #2\csname @#1\endcsname#3%
1598     \fi
1599   }%
1600 }

```

`\IfTitleElement` Determine if the given element has been set:

```

1601 \newcommand{\IfTitleElement}[3]{%
1602   \expandafter\ifx\csname @#1\endcsname\@empty
1603     #2%
1604   \else
1605     #3%
1606   \fi
1607 }

```

`\titlebody`

```

1608 \newcommand{\titlebody}{%
1609   \SetTitleElement{title}{\maintitlefont}{\postmaintitle}%
1610   \SetTitleElement{volume}{\mainvolume font}{\postmainvolume}%
1611   \SetTitleElement{subtitle}{\mainsubtitlefont}{\postmain subtitle}%
1612   \SetTitleElement{logo}{\mainlogo font}{\postmainlogo}%

```

```

1613 \SetTitleElement{team}{\mainteamfont}{\postmainteam}%
1614 \SetTitleElement{author}{\mainauthorfont}{\postmainauthor}%
1615 \SetTitleElement{productioneditor}{\mainproductioneditorfont}%
1616     {\postmainproductioneditor}%
1617 }

```

\c@lamaketitle

```

1618 \ifjmlrhtml
1619   \renewcommand{\c@lamaketitle}{%
1620     \HCode{<table cellpadding="2" cellspacing="2" border="0" width="100\%">}%
1621     \HCode{<tbody><tr><td valign="top">%
1622       \HCode{<h1>}%
1623       \@title\newline
1624       \ifx\@jmlrvolume\@empty
1625         \ifx\@volume\@empty
1626           \else
1627             Volume \@volume
1628             \ifx\@subtitle\@empty\else: \fi
1629           \fi
1630         \else
1631           Volume \@jmlrvolume
1632           \ifx\@subtitle\@empty\else: \fi
1633         \fi
1634         \@subtitle
1635       \HCode{</h1>}%
1636       \newline
1637       \textbf{Editors: \@author}
1638       \HCode{</td><td valign="top">}%
1639       \@logo
1640     \HCode{</td></tr></tbody></table>}%
1641     \let\maintitle\@title
1642   }
1643 \else
1644   \renewcommand{\c@lamaketitle}{%
1645     \pagenumbering{alph}%
1646     \pagestyle{empty}%
1647     \begin{titlepage}%
1648       \let\footnotesize\small
1649       \let\footnoterule\relax
1650       \let\footnote\thanks
1651       \titlebody
1652       \par
1653       \@thanks
1654     \end{titlepage}%
1655     \setcounter{footnote}{0}%
1656     \let\maintitle\@title
1657     \c@lmtitleempty
1658   }
1659 \fi

```

\maintitlefont

```
1660 \renewcommand{\maintitlefont}{%  
1661   \null\vskip15pt\relax\par  
1662   \flushleft\Huge\bfseries\noindent}
```

\postmaintitle

```
1663 \renewcommand{\postmaintitle}{%  
1664   \par\relax  
1665 }
```

\mainvolumefont

```
1666 \newcommand{\mainvolumefont}{%  
1667   \flushleft\noindent\LARGE\bfseries Volume  
1668 }
```

\postmainvolume

```
1669 \newcommand{\postmainvolume}{%  
1670   \IfTitleElement{subtitle}{:}\par\relax  
1671 }
```

\mainissuefont

```
1672 \newcommand{\mainissuefont}{%  
1673   \flushleft\noindent\LARGE\bfseries Issue  
1674 }
```

\postmainissue

```
1675 \newcommand{\postmainissue}{%  
1676   \par\relax  
1677 }
```

\mainsubtitlefont

```
1678 \newcommand{\mainsubtitlefont}{%  
1679   \flushleft\LARGE\bfseries\noindent}
```

\postmainsubtitle

```
1680 \newcommand{\postmainsubtitle}{\par}
```

\mainlogofont

```
1681 \newcommand{\mainlogofont}{%  
1682   \vfill  
1683   \begin{center}}
```

\postmainlogo

```
1684 \newcommand{\postmainlogo}{\end{center}\vfill\par}
```

\mainteamfont

```
1685 \newcommand{\mainteamfont}{\flushleft\bfseries\Large\noindent}
```

```

\postmainteam
1686 \newcommand{\postmainteam}{\par}

\mainauthorfont
1687 \renewcommand{\mainauthorfont}{%
1688   \flushleft\Large\itshape\doublespacing\noindent}

\postmainauthor
1689 \renewcommand{\postmainauthor}{%
1690 \par}

productioneditorfont
1691 \newcommand{\mainproductioneditorfont}{%
1692   \flushleft\Large\noindent \@productioneditorname: \itshape}

mainproductioneditor
1693 \newcommand{\postmainproductioneditor}{\par}

\maindatefont
1694 \renewcommand{\maindatefont}{\par}

\postmaindate
1695 \renewcommand{\postmaindate}{\par}

signoff Editorial team listed at the end of a preface etc. The mandatory argument is the
date, the optional argument is the team title. Each editor should be separated
with \Editor.
1696 \ifjmlrhtml
1697   \newenvironment{signoff}[2][The Editorial Team]{%
1698     \def\Editor##1{##1\par\vskip\baselineskip\noindent\ignorespaces}%
1699     \def\@editorialteam{#1}%
1700     \def\@signoffdate{#2}%
1701     \par\vskip\baselineskip\noindent
1702     \ifx\@signoffdate\@empty
1703       \else
1704         \emph{\@signoffdate}\nopagebreak\par
1705         \nopagebreak\vskip\baselineskip\noindent
1706       \fi
1707       \ifx\@editorialteam\@empty
1708       \else
1709         \@editorialteam:\nopagebreak\par\nopagebreak\vskip\baselineskip
1710       \fi
1711       \nopagebreak\noindent\ignorespaces
1712     }%
1713     {%
1714     }%
1715   \else
1716   \newenvironment{signoff}[2][The Editorial Team]{%

```

```

1717 \def\Editor##1{%
1718   \protected@write\@mainauxout{}\string\@prefaceeditor{##1}}%
1719   \begin{tabular}{@{}l@{}}%
1720     ##1%
1721   \end{tabular}%
1722   \par\vskip\baselineskip\noindent\ignorespaces
1723 }%
1724 \def\@editorialteam{#1}%
1725 \def\@signoffdate{#2}%
1726 \par\vskip\baselineskip\noindent
1727 \ifx\@signoffdate\@empty
1728 \else
1729   \emph{\@signoffdate}\par
1730   \vskip\baselineskip\noindent
1731 \fi
1732 \ifx\@editorialteam\@empty
1733 \else
1734   \@editorialteam:\par\vskip\baselineskip
1735 \fi
1736 \noindent\ignorespaces
1737 }%
1738 {%
1739 }
1740 \fi

```

authorsignoff An author can sign off at the end of a chapter (such as a foreword). Each author should be separated with `\Author`.

```

1741 \newenvironment{authorsignoff}{%
1742   \def\Author##1{\begin{tabular}{@{}p{\linewidth}@{}}%
1743     ##1%
1744   \end{tabular}}%
1745   \par\vskip\baselineskip\noindent\ignorespaces
1746 }%
1747   \par\vskip\baselineskip\noindent\ignorespaces
1748 }{%
1749 }

```

\zeroextracounters Reset counters at the start of each imported article

```

1750 \renewcommand{\zeroextracounters}{%
1751   \@ifundefined{c@theorem}{\setcounter{theorem}{0}}%
1752   \@ifundefined{c@algorithm}{\setcounter{algorithm}{0}}%
1753   \@ifundefined{c@algocf}{\setcounter{algocf}{0}}%
1754   \@ifundefined{c@example}{\setcounter{example}{0}}%
1755   \@ifundefined{c@definition}{\setcounter{definition}{0}}%
1756 }

```

\contentsname Redefine title of the table of contents

```

1757 \renewcommand*{\contentsname}{Table of Contents}

```

```

\theHalgorithm
1758 \def\theHalgorithm{\theHchapter.\thealgorithm}

\theHsection
1759 \def\theHsection{\theHchapter.\thesection}
1760 \def\theHsubsection{\theHchapter.\thesubsection}
1761 \def\theHsubsubsection{\theHchapter.\thesubsubsection}
1762 \def\theHparagraph{\theHchapter.\theparagraph}

\theHsubfigure
1763 \def\theHsubfigure{\theHfigure.\arabic{subfigure}}
1764 \def\theHsubtable{\theHtable.\arabic{subtable}}

\theHfootnote
1765 \def\theHfootnote{\theHchapter.\alpha{footnote}}

\theHtable
1766 \def\theHtable{\theHchapter.\arabic{table}}

\theHfigure
1767 \def\theHfigure{\theHchapter.\arabic{figure}}

\theHalgocf
1768 \def\theHalgocf{\theHchapter.\thealgocf}

\mailto
1769 \renewcommand*{\mailto}[1]{%
1770   \href{mailto:#1}{\nolinkurl{#1}}%
1771 }

1772 \c@lhaschapterfalse
1773 \let\c@lthesec\thesection

    Make sure the hyperlinks work

doimportchapterHref
1774 \newcommand\doimportchapterHref{%
1775   \edef\@currentHref{chapter.\thechapter}%
1776 }

\toclevel@appendix Set the toc level for the main appendices
1777 \def\toclevel@appendix{-1}

    hyperref and combine don't play nicely need to fudge the cross-referencing a
    bit.

\Xprefix
1778 \def\Xprefix{}

```


\Xref

```
1779 \DeclareRobustCommand\Xref{\@ifstar\@Xrefstar\T@Xref}%
```

\Xpageref

```
1780 \DeclareRobustCommand\Xpageref{%
1781   \@ifstar\@Xpagerefstar\T@Xpageref
1782 }%
```

\HyRef@StarSetXRef

```
1783 \def\HyRef@StarSetXRef#1{%
1784   \begingroup
1785   \Hy@safe@activestrue
1786   \edef\x{#1}%
1787   \@onelevel@sanitize\x
1788   \edef\x{\endgroup
1789     \noexpand\HyRef@@StarSetRef
1790     \expandafter\noexpand\csname r@\Xprefix\x\endcsname{\x}%
1791   }%
1792   \x
1793 }
1794 %   \end{macrocode}
1795 %\end{macro}
1796 %
1797 %\begin{macro}{\@Xrefstar}
1798 %   \begin{macrocode}
1799 \def\@Xrefstar#1{%
1800   \HyRef@StarSetXRef{#1}\@firstoffive
1801 }
```

\@Xpagerefstar

```
1802 \def\@Xpagerefstar#1{%
1803   \HyRef@StarSetXRef{#1}\@secondoffive
1804 }
```

\T@Xref

```
1805 \def\T@Xref#1{%
1806   \Hy@safe@activestrue
1807   \expandafter\@setXref\csname r@\Xprefix#1\endcsname\@firstoffive{#1}%
1808   \Hy@safe@activesfalse
1809 }%
```

\T@Xpageref

```
1810 \def\T@Xpageref#1{%
1811   \Hy@safe@activestrue
1812   \expandafter\@setXref\csname r@\Xprefix#1\endcsname\@secondoffive{#1}%
1813   \Hy@safe@activesfalse
1814 }%
```

\Xlabel

```
1815 \def\Xlabel#1{%
1816   \@bsphack
1817   \begingroup
1818     \@onelevel@sanitize\@currentlabelname
1819     \edef\@currentlabelname{%
1820       \expandafter\strip@period\@currentlabelname\relax.\relax\@@@
1821     }%
1822     \protected@write\@mainauxout{}\{%
1823       \string\newlabel{\Xprefix#1}{\@currentlabel}{\thepage}%
1824       {\@currentlabelname}{\@currentHref}{}}%
1825     }%
1826   \endgroup
1827   \@esphack
1828 }
1829 \let\ltx@label\Xlabel
```

\@setXref

```
1830 \def\@setXref#1#2#3{% csname, extract group, refname
1831   \ifx#1\relax
1832     \protect\G@refundefinedtrue
1833     \nfss@text{\reset@font\bfseries ??}%
1834     \@latex@warning{%
1835       Reference ‘#3’ on page \thepage \space undefined%
1836     }%
1837   \else
1838     \expandafter\Hy@setref@link#1\@empty\@empty\@nil{#2}%
1839   \fi
1840 }
```

\@secondoffive Something's redefining \@secondoffive incorrectly at the start of the document when hyperref's draft mode is on. Need to fix it.

```
1841 \AtBeginDocument{%
1842   \renewcommand\@secondoffive[5]{#2}%
1843   \jmlrwritepdfinfo
1844   \let\jmlrwritepdfinfo\relax
1845 }
```

Need to write imported chapter label to main auxfile.

\@setimportlabel

```
1846 \def\@setimportlabel{%
1847   \let\@mainauxout\@auxout
1848   \let\HRLabel\label
1849 }

1850 \AtBeginDocument{\@jmlrbegindoc}
```

\@jmlrbegindoc

```

1851 \newcommand*\@jmlrbegin{
1852   \@setimportlabel
1853   \gdef\@setimportlabel{\let\ref\Xref \let\pageref\Xpageref}%
1854   \let\ReadBookmarks\relax

```

Patch to work with auxhook if loaded

```

1855   \@ifundefined{@beginmainauxhook}{\@beginmainauxhook}%
1856 }

```

Imported papers modify \InputIfFileExists so save original definition.

```

1857 \let\@org@InputIfFileExists\InputIfFileExists

```

jmlrpapers

```

1858 \newenvironment{jmlrpapers}{%
1859 \def\@begin{
1860   \@jmlrbegin{
1861   \let\bibcite\c@lbNATbibcite
1862 }
1863 \def\@end{
1864   \@jmlrend{
1865   \let\bibcite\c@lbNAT@testdef
1866 }
1867   \begin{papers}[]

1868   \if@twocolumn
1869     \def\@jmlr@restore{\twocolumn}%
1870   \else
1871     \def\@jmlr@restore{\onecolumn}%
1872   \fi
1873   \jmlrarticlecommands
1874   \let\importpubpaper\@importpubpaper
1875   \let\importpaper\@importpaper
1876   \let\importarticle\@importarticle
1877   \let\label\Xlabel
1878   \let\ref\Xref
1879   \pagestyle{article}%
1880 }{%
1881   \@jmlr@restore
1882   \end{papers}
1883 }

```

\addtomaincontents

```

1884 \newcommand{\addtomaincontents}[2]{%
1885   \protected@write\@mainauxout{\let\label\@gobble\let\index\@gobble
1886     \let\glossary\@gobble}{\string\@writefile{#1}{#2}}%
1887 }

```

\@write@author

```

1888 \newcommand*{\@write@author}[2]{%
1889   \def\@jmlr@authors@sep{ and }%
1890   \protected@write\@mainauxout{}{%
1891     \string\@new@articleauthor{#1}{#2}%
1892   }%
1893 }

\@new@articleauthor
1894 \newcommand*{\@new@articleauthor}[2]{%
1895   \expandafter\gdef\csname @jmlr@author@#1\endcsname{%
1896     \hyperref[#1jmlrstart]{#2}}%
1897 }

\@write@jmlr@import The accompanying makejmlrbook Perl script scans the aux file for infor-
mation. Any articles imported using \importpubpaper, \importpaper or
\importarticle need to write the relevant information to the aux file.
1898 \newcommand*{\@write@jmlr@import}[3]{%
1899   \protected@write\@mainauxout{}\string\@jmlr@import{#1}{#2}{#3}}%
1900 }

\@jmlr@import LATEX should ignore \@jmlr@import as it's only needed for makejmlrbook:
1901 \newcommand*{\@jmlr@import}[3]{}

\@write@jmlr@apdimport As above but for files imported in the appendix.
1902 \newcommand*{\@write@jmlr@apdimport}[3]{%
1903   \protected@write\@mainauxout{}\string\@jmlr@apdimport{#1}{#2}{#3}}%
1904 }

\@jmlr@apdimport As above but for files imported in the appendix. LATEX should ignore \@jmlr@apdimport
as it's only needed for makejmlrbookgui:
1905 \newcommand*{\@jmlr@apdimport}[3]{}

\@write@jmlr@import Initialise to \@write@jmlr@import and switch to \@write@jmlr@apdimport
in the appendices.
1906 \def\@write@jmlr@import{\@write@jmlr@import}

\jmlrpremaketitlehook Redefine \jmlrpremaketitlehook
1907 \def\jmlrpremaketitlehook{%
1908   \cleardoublepage
1909   \phantomsection
1910   \let\@currentlabelname\@shorttitle

1911   \refstepcounter{chapter}%
1912 }%

\jmlrimporthook Hook just before document is imported.
1913 \newcommand*{\jmlrimporthook}{}

```

`\importpubpaper` Import a document that has already been published. Syntax: `\importpubpaper` [*<label>*] {*<dir>*}{*<file>*}{*<pages>*} where *<dir>* is the directory in which the paper is located, *<file>* is the name of the file and *<pages>* indicates the page range *for the original version*. The optional argument is a label. This is used to prefix the labels and citations in the document so they don't clash with other imported articles. If omitted, *<dir>/<file>* is used instead.

```

1914 \newcommand*{\@importpubpaper}[4][\@importdir\@importfile]{%
1915   \bgroup
1916     \def\@importdir{#2}%
1917     \def\@importfile{#3}%
1918     \@write@jmlr@import{#1}{#2}{#3}%
1919     \def\@extra@b@citeb{#1}%
1920     \def\@extra@b@info{#1}%
1921     \jmlrpages{#4}%
1922     \graphicspath{{\@importdir}}%
1923     \def\jmlrmaketitlehook{%

1924       \label{}%
1925       \def\titlebreak{ }%
1926       \addtomaincontents{toc}%

1927       {%
1928         \protect\contentsline{papertitle}{\@title}{\thepage}%
1929         {page.\thepage}}%
1930       \pdfbookmark{\@shorttitle}{chapter.\theHchapter}%
1931       \def\@jmlr@authors@sep{ \& }%

1932       \tocchapterpubauthor{\@jmlr@authors}%
1933       {%
1934         \@jmlrabbvrproceedings
1935         \ifx\@jmlrvolume\@empty
1936           \ifx\@jmlrpages\@empty\else\space\fi
1937         \else
1938           \space\@jmlrvolume
1939           \ifx\@jmlrissue\@empty
1940             \else
1941               (\@jmlrissue)%
1942             \fi
1943           \ifx\@jmlrpages\@empty\else:\fi
1944         \fi
1945         \ifx\@jmlrpages\@empty
1946         \else
1947           \@jmlrpages
1948           \ifx\@jmlryear\@empty\else,\fi
1949         \fi
1950         \space\@jmlryear
1951       }%

1952       \@write@author{#1}{\@jmlr@authors}%

```

```

1953 }%
1954 \def\InputIfFileExists##1##2##3{%
1955   \IfFileExists{##1}{%
1956     \@org@InputIfFileExists{##1}{##2}{##3}%
1957   }%
1958   {%
1959     \@org@InputIfFileExists{\@importdir##1}{##2}{##3}%
1960   }%
1961 }%
1962 \def\Xprefix{#1}%
1963 \jmlrimporthook
1964 \import{\@importdir\@importfile}%
1965 \def\Xprefix{}%
1966 \egroup
1967 \gdef\@shortauthor{}%
1968 \gdef\@shorttitle{}%
1969 \gdef\@firstauthor{}%
1970 \gdef\@jmlr@authors{\@jmlrauthors}%
1971 \gdef\@jmlrauthors{}%
1972 \gdef\@firstsurname{}%
1973 }
1974 \newcommand{\importpubpaper}[4][\@importdir\@importfile]{%
1975   \ClassError{jmlrbook}{\string\importpubpaper\space
1976not permitted outside ‘jmlrpapers’ environment}{}%
1977 }

```

`\importpaper` Like `\importpubpaper` but sets the pages to the page-range for this book.

```

1978 \newcommand{\@importpaper}[3][\@importdir\@importfile]{%
1979   \bgroup
1980     \def\@importdir{#2}/%
1981     \def\@importfile{#3}%
1982     \@write@jmlr@import{#1}{#2}{#3}%
1983     \def\@extra@b@citeb{#1}%
1984     \def\@extra@b@info{#1}%
1985     \jmlrpages{\protect\@articlepagesref}%
1986     \graphicspath{{\@importdir}}%
1987     \def\jmlrmaketitlehook{%

1988       \label{}%
1989       \def\titlebreak{ }%
1990       \addtomaincontents{toc}%

1991       {%
1992         \protect\contentsline{papertitle}{\@title}{\thepage}%
1993       {page.\thepage}}%
1994       \pdfbookmark{\@shorttitle}{chapter.\theHchapter}%
1995       \def\@jmlr@authors@sep{ \& }%

1996       \tocchapterpubauthor{\@jmlr@authors}%
1997       {%

```

```

1998      \@jmlrabbbrvproceedings
1999      \ifx\@jmlrvolume\@empty
2000      \space
2001      \else
2002      \space\@jmlrvolume
2003      \ifx\@jmlrissue\@empty
2004      \else
2005      (\@jmlrissue)%
2006      \fi
2007      :%
2008      \fi
2009      \protect\articlepagesref{#1}%
2010      \ifx\@jmlryear\@empty\else,\fi
2011      \space\@jmlryear
2012      }%

2013      \@writeauthor{#1}{\@jmlr@authors}%
2014      }%
2015      \def\InputIfFileExists##1##2##3{%
2016      \IfFileExists{##1}{%
2017      \@org@InputIfFileExists{##1}{##2}{##3}%
2018      }%
2019      {%
2020      \@org@InputIfFileExists{\@importdir##1}{##2}{##3}%
2021      }%
2022      }%
2023      \def\Xprefix{#1}%

```

Disable \jmlrvolume, \jmlryear, \jmlrworkshop etc (since the imported papers belong to the same volume as the book—use \importpubpaper for papers pre-published in another volume).

```

2024      \let\jmlrvolume\@gobble
2025      \let\jmlryear\@gobble
2026      \let\jmlrworkshop\@gobble
2027      \let\jmlrissue\@gobble
2028      \let\jmlrpages\@gobble
2029      \jmlrimporthook
2030      \import{\@importdir\@importfile}%
2031      \def\Xprefix{}%
2032      \egroup
2033      \gdef\@shortauthor{}%
2034      \gdef\@shorttitle{}%
2035      \gdef\@firstauthor{}%
2036      \gdef\@jmlr@authors{\@jmlrauthors}%
2037      \gdef\@jmlrauthors{}%
2038      \gdef\@firstsurname{}%
2039      }
2040
2041      \newcommand{\importpaper}[3][\@importpaper]{%

```

```

2042 \ClassError{jmlrbook}{\string\importpaper\space
2043not permitted outside 'jmlrpapers' environment}{}%
2044 }

```

`\importarticle` Import a document that hasn't been published. Syntax: `\importarticle[⟨label⟩]{⟨dir⟩}{⟨file⟩}` where `⟨dir⟩` is the directory in which the paper is located and `⟨file⟩` is the name of the file. The optional argument is a label. This is used to prefix the labels and citations in the document so they don't clash with other imported articles. If omitted, `⟨file⟩` is used instead.

```

2045 \newcommand{\@importarticle}[3][\@importdir\@importfile]{%
2046   \bgroup
2047     \def\@importdir{#2/}%
2048     \def\@importfile{#3}%
2049     \@write@jmlr@import{#1}{#2}{#3}%
2050     \def\@extra@b@citeb{#1}%
2051     \def\@extra@b@info{#1}%
2052     \def\jmlrmaketitlehook{%
2053       \def\titlebreak{ }%
2054       \addtomaincontents{toc}%

2055       {%
2056         \protect\contentsline{papertitle}{\@title}{\thepage}%
2057         {page.\thepage}}%

2058       \label{ }%
2059       \pdfbookmark{\@shorttitle}{chapter.\theHchapter}%
2060       \def\@jmlr@authors@sep{ \& }%

2061       \tocchapterauthor{\@jmlr@authors}%
2062       \@write@author{#1}{\@jmlr@authors}%
2063       \jmlrpages{ }%
2064       \jmlrvolume{ }%
2065       \jmlryear{ }%
2066       \jmlrsubmitted{ }%
2067       \jmlrpublished{ }%
2068       \jmlrproceedings{ }{ }%
2069     }%
2070     \graphicspath{{\@importdir}}%
2071     \def\InputIfFileExists##1##2##3{%
2072       \IfFileExists{##1}{%
2073         \@org@InputIfFileExists{##1}{##2}{##3}%
2074       }%
2075       {%
2076         \@org@InputIfFileExists{\@importdir##1}{##2}{##3}%
2077       }%
2078     }%
2079     \def\Xprefix{#1}%
2080     \jmlrimporthook

```



```

2081 \let\ps@jmlrtps\ps@articlet
2082 \import{\@importdir\@importfile}%
2083 \def\Xprefix{}%
2084 \egroup
2085 \gdef\@shortauthor{}%
2086 \gdef\@shorttitle{}%
2087 \gdef\@firstauthor{}%
2088 \gdef\@jmlr@authors{\@jmlrauthors}%
2089 \gdef\@jmlrauthors{}%
2090 \gdef\@firstsurname{}%
2091 }
2092 \newcommand{\importarticle}[3][{}]{%
2093 \ClassError{jmlrbook}{\string\importarticle\space
2094 not permitted outside ‘jmlrpapers’ environment}{}%
2095 }

```

`\addtocpart` Add a part to the TOC without printing anything in the text (but does a `\cleardoublepage`).

```

2096 \newcommand{\addtocpart}[1]{%
2097 \cleardoublepage
2098 \refstepcounter{tocpart}%
2099 \addtocontents{toc}{\protect\tocpart{#1}}%
2100 \pdfbookmark[-1]{#1}{part.\thetocpart}%
2101 }
2102 \newcounter{tocpart}

```

`\tocpart` Define the appearance of a part in the TOC.

```

2103 \newcommand{\tocpart}[1]{%
2104 \addpenalty{-\@highpenalty}%
2105 \vskip 1.0ex \@plus\p@
2106 \setlength\@tempdima{2.25em}%
2107 \begingroup
2108 \parindent \z@ \rightskip \@pnumwidth
2109 \parfillskip -\@pnumwidth
2110 \leavevmode \large\bfseries
2111 \advance\leftskip\@tempdima
2112 \hskip -\leftskip
2113 #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss \null}\par
2114 \penalty\@highpenalty
2115 \endgroup
2116 }

```

Set up the layout of the chapter headings

```

2117 \setlength{\prechapterskip}{3em}
2118 \setlength{\postchapterskip}{20pt}

```

`chapternumberformat`

```

2119 \renewcommand{\chapternumberformat}[1]{%
2120 \Large\bfseries \@chapapp\space#1\par

```

2121 }

`\chaptertitleformat`

2122 `\renewcommand{\chaptertitleformat}[1]{%`
2123 `\Large\bfseries #1}`

`\chapterformat`

2124 `\renewcommand*{\chapterformat}{%`
2125 `\raggedright`
2126 `}`

Set up the format of a part in the book (not a part in an article).

`\preparthook`

2127 `\renewcommand{\preparthook}{\cleardoublepage\null\vfil}`

`\partnumberformat`

2128 `\renewcommand{\partnumberformat}[1]{%`
2129 `\Huge\bfseries \@partapp\nobreakspace#1\par\nobreak`
2130 `\vskip 20\p@`
2131 `}`

`\postparthook`

2132 `\def\postparthook{%`
2133 `\thispagestyle{empty}%`
2134 `\vfil\newpage`
2135 `\null`
2136 `\thispagestyle{empty}%`
2137 `\newpage`
2138 `}`

`\@curparthead` The heading of the current part

2139 `\newcommand{\@curparthead}{}%`

`\parttitleformat`

2140 `\renewcommand{\parttitleformat}[1]{#1%`
2141 `\gdef\@curparthead{\@partapp\space \thepart. #1}%`
2142 `\@mkboth{\@curparthead}{\@curparthead}%`
2143 `}`

`\firstpageno` Change `\firstpageno` to do nothing as the page number will be determined by the book.

2144 `\renewcommand{\firstpageno}[1]{}%`

`\tocchapterauthor` Add the author of the current chapter to the table of contents.

2145 `\newcommand{\tocchapterauthor}[1]{%`
2146 `\addtomaincontents{toc}{\protect\contentsline{chapterauthor}{%`
2147 `#1}{-}{-}}%`
2148 `}`

`\tocchapterpubauthor` Add the author of an imported prepublished paper to the table of contents. The first argument is the author (or list of authors). The second argument is the reference to the published article.

```
2149 \newcommand{\tocchapterpubauthor}[2]{%
2150   \addtomaincontents{toc}{\protect\contentsline{chapterauthor}{%
2151     #1; #2.}{-}{-}}%
2152 }
```

Set up the formatting in the TOC

```
2153 \renewcommand*\@pnumwidth{2em}
```

`\l@part` Format for book parts

```
2154 \renewcommand*\l@part[2]{%
2155   \ifnum \c@tocdepth > \m@ne
2156     \addpenalty{-\@highpenalty}%
2157     \vskip 1.0em \@plus \p@
2158     %\setlength\@tempdima{5em}%
2159     \settowidth\@tempdima{\large\bfseries \@partapp\space MM}%
2160     \vbox{%
2161       \pagerule
2162       \begingroup
2163         \parindent \z@ \rightskip \@pnumwidth
2164         \parfillskip -\@pnumwidth
2165         \leavevmode \large\bfseries
2166         \advance\leftskip\@tempdima
2167         \hskip -\leftskip
2168         \renewcommand*\numberline[1]{\hb@xt@ \@tempdima
2169           {\@partapp\space ##1\hfil }}%
2170         #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss
2171           \normalfont\normalsize #2}\par
2172         \penalty\@highpenalty
2173       \endgroup
2174     \pagerule
2175   }%
2176   \fi}
```

`\l@chapter`

```
2177 \renewcommand{\l@chapter}[2]{%
2178   \ifnum \c@tocdepth > \m@ne
2179     \addpenalty{-\@highpenalty}%
2180     \vskip 1.0em \@plus \p@
2181     \setlength\@tempdima{2em}%
2182     \begingroup
2183       \parindent \z@
2184       \rightskip \@pnumwidth
2185       \parfillskip -\@pnumwidth
2186       \leavevmode \large \bfseries
2187       \advance \leftskip \@tempdima
```

```

2188     \hskip -\leftskip
2189     \renewcommand*\numberline[1]{\hb@xt@ \@tempdima
2190       {##1\hfil }}%
2191     #1\nobreak \hfil \nobreak \hb@xt@ \@pnumwidth {\hss
2192       \normalfont\normalsize #2}\par
2193     \penalty \@highpenalty
2194   \endgroup
2195 \fi
2196 }

```

\l@papertitle

```

2197 \newcommand*\l@papertitle[2]{%
2198   \ifnum \c@tocdepth >\m@ne
2199     \addpenalty{-\@highpenalty}%
2200     \vskip 1.0em \@plus\p@
2201     \setlength\@tempdima{3em}%
2202     \begingroup
2203       \leavevmode \raggedright\itshape
2204       #1\nobreak\hfill \nobreak\hb@xt@\@pnumwidth{\hss
2205         \normalfont#2}%
2206       \par
2207       \penalty\@highpenalty
2208     \endgroup
2209   \fi
2210 }

```

\l@chapterauthor

```

2211 \newcommand*\l@chapterauthor[2]{%
2212   \ifnum \c@tocdepth >\m@ne

2213     \begingroup
2214       \parindent \z@
2215       \rightskip \@pnumwidth
2216       \parfillskip -\@pnumwidth
2217       \leavevmode \raggedright
2218       \parbox{\linewidth-\@pnumwidth}{\raggedright#1\par}%
2219       \par
2220     \endgroup
2221   \fi}

```

\l@section

```

2222 \renewcommand*\l@section[2]{%
2223   \ifnum \c@tocdepth >\m@ne
2224     \addpenalty{-\@highpenalty}%
2225     \vskip 1.0em \@plus\p@
2226     \setlength\@tempdima{3em}%
2227     \begingroup
2228       \parindent \z@ \rightskip \@pnumwidth
2229       \parfillskip -\@pnumwidth

```

```

2230      \leavevmode \normalsize\mdseries
2231      \advance\leftskip\@tempdima
2232      \hskip -\leftskip
2233      #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
2234      \penalty\@highpenalty
2235      \endgroup
2236      \fi}

```

`\l@section`

```

2237 \renewcommand*\l@section[2]{%
2238   \ifnum \c@tocdepth >\m@ne
2239     \addpenalty{-\@highpenalty}%
2240     \vskip 1.0em \@plus\p@
2241     \setlength\@tempdima{3.5em}%
2242     \begingroup
2243       \parindent \z@ \rightskip \@pnumwidth
2244       \parfillskip -\@pnumwidth
2245       \leavevmode \normalsize\mdseries
2246       \advance\leftskip\@tempdima
2247       \hskip -\leftskip
2248       #1\nobreak\hfil \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
2249       \penalty\@highpenalty
2250     \endgroup
2251   \fi}

```

`\chaptermark`

```

2252 \renewcommand*\chaptermark[1]{%
2253   \@mkboth{\@curparthead}{\protect\thechapter. #1}%
2254 }

```

Set up page styles

`\firstpagehead`

```

2255 \newcommand{\firstpagehead}{%

```

`\firstpagefoot`

```

2256 \newcommand{\firstpagefoot}{%
2257   \@reprint\hfill\thepage
2258 }

```

`\headfont` Set the header font

```

2259 \newcommand*\headfont{\reset@font\small\scshape}%

```

`\footfont` Set the footer font

```

2260 \newcommand*\footfont{\reset@font\small\itshape}%

```

`\ps@chplain` Page style for first page of a chapter

```

2261 \newcommand*\ps@chplain{%

```

```

2262 \let\@mkboth\@gobbletwo
2263 \renewcommand*{\@oddhead}{\headfont\firstpagehead}%
2264 \renewcommand*{\@evenhead}{}%
2265 \renewcommand*{\@oddfoot}{\footfont\firstpagefoot}%
2266 \renewcommand*{\@evenfoot}{\footfont\thepage\hfill
2267 }%
2268 }
2269 \let\ps@plain\ps@chplain

```

`\ps@article` Page style for the imported articles.

```

2270 \newcommand*{\ps@article}{%
2271 \let\@mkboth\@gobbletwo
2272 \renewcommand*{\@oddhead}{\headfont\hfill\@shorttitle}%
2273 \renewcommand*{\@evenhead}{\headfont\@shortauthor\hfill}%
2274 \renewcommand*{\@oddfoot}{\footfont\hfill\thepage}
2275 \renewcommand*{\@evenfoot}{\footfont\thepage\hfill}
2276 }

```

`\ps@articlet` Title page style for imported articles (imported using `\importarticle`)

```

2277 \newcommand*{\ps@articlet}{%
2278 \let\@mkboth\@gobbletwo
2279 \renewcommand*{\@oddhead}{}%
2280 \renewcommand*{\@evenhead}{}%
2281 \renewcommand*{\@oddfoot}{\footfont\hfill\thepage}
2282 \renewcommand*{\@evenfoot}{\footfont\thepage\hfill}
2283 }

```

`\ps@jmlrbook` Page style for book

```

2284 \newcommand*{\ps@jmlrbook}{%
2285 \renewcommand*{\@oddfoot}{\footfont\hfill\thepage}
2286 \renewcommand*{\@evenfoot}{\footfont\thepage\hfill}
2287 \def\@evenhead{\headfont\leftmark\hfill}%
2288 \def\@oddhead{\hfill\headfont\rightmark}%
2289 \let\@mkboth\markboth
2290 \renewcommand*{\sectionmark}[1]{}%
2291 }

```

`\markleft` Provide a command to set just the left header mark.

```

2292 \newcommand*{\markleft}[1]{%
2293 \begingroup
2294 \let\label\relax
2295 \let\index\relax
2296 \let\glossary\relax
2297 \expandafter\@markleft\@themark{#1}%
2298 \@temptokena
2299 \expandafter{\@themark}%
2300 \mark{\the\@temptokena}
2301 \endgroup
2302 \if@nobreak

```

```

2303 \ifvmode
2304 \nobreak
2305 \fi
2306 \fi
2307 }
2308 \newcommand*{\@markleft}[3]{%
2309 \temptokena{#2}%
2310 \unrestored@protected@xdef\themark{#{3}{\the\temptokena}}
2311 }

```

\morefrontmatter

```

2312 \renewcommand*{\morefrontmatter}{\pagestyle{jmlrbook}%
2313 \def\chaptermark##1{%
2314 \mkboth{##1\hfill}{\hfill##1}}%
2315 }

```

\moremainmatter

```

2316 \renewcommand*{\moremainmatter}{\pagestyle{jmlrbook}%
2317 \def\chaptermark##1{%
2318 \mkboth{\@curparthead}{\protect\thechapter. #1}%
2319 }%
2320 }

```

\bibsection Set the bibliography headings in the articles

```

2321 \renewcommand*\bibsection{\section*{\refname}}

```

Set up the book commands:

```

2322 \jmlrbookcommands

```

In the event that authors have used different versions of algorithm2e, define old command names.

```

2323 \providecommand*\SetNoLine{\SetAlgoNoLine}
2324 \providecommand*\SetVline{\SetAlgoVlined}
2325 \providecommand*\Setvlineskip{\SetVlineSkip}
2326 \providecommand*\SetLine{\SetAlgoLined}
2327 \providecommand*\dontprintsemicolon{\DontPrintSemicolon}
2328 \providecommand*\printsemicolon{\PrintSemicolon}
2329 \providecommand*\incmargin{\IncMargin}
2330 \providecommand*\decmargin[1]{\DecMargin{-#1}}
2331 \providecommand*\setnlskip{\SetNlSkip}
2332 \providecommand*\Setnlskip{\SetNlSkip}
2333 \providecommand*\setalcapskip{\SetAlCapSkip}
2334 \providecommand*\setalcaphskip{\SetAlCapHSkip}
2335 \providecommand*\nlsty{\NlSty}
2336 \providecommand*\Setnlsty{\SetNlSty}
2337 \providecommand*\linesnumbered{\LinesNumbered}
2338 \providecommand*\linesnotnumbered{\LinesNotNumbered}
2339 \providecommand*\linesnumberedhidden{\LinesNumberedHidden}
2340 \providecommand*\showln{\ShowLn}

```

```
2341 \providecommand*\showlnlabel{\ShowLnLabel}
2342 \providecommand*\nocaptionofalgo{\NoCaptionOfAlgo}
2343 \providecommand*\restorecaptionofalgo{\RestoreCaptionOfAlgo}
2344 \providecommand*\restylealgo{\RestyleAlgo}
2345 \providecommand*\Titleofalgo{\TitleOfAlgo}
```


Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

Symbols	<code>\@jmlrworkshop</code> .. 50	<code>\@titlefoot</code> 48
<code>\@write@jmlr@apdimport</code>	<code>\@jmlryear</code> 50	<code>\@write@author</code> .. 91
..... 92	<code>\@makecaption</code> ... 51	<code>\@write@jmlr@import</code>
<code>\@write@jmlr@import</code>	<code>\@makechapterhead</code>	..... 92
..... 92	..... 66	<code>\@xthm</code> 58
<code>\@Xpagerefstar</code> .. 89	<code>\@makefntext</code> 40	<code>\@ythm</code> 59
<code>\@articlepagesref</code>	<code>\@makeschapterhead</code>	<code>\@</code> 8
..... 81	..... 67	10pt (option) 74
<code>\@begintheorem</code> .. 59	<code>\@name</code> 44	11pt (option) 74
<code>\@bookpart</code> 70	<code>\@new@articleauthor</code>	12pt (option) 75
<code>\@chapter</code> 65	..... 92	7x10 (option) 74
<code>\@curparthead</code> ... 98	<code>\@opargbegintheorem</code>	
<code>\@editor</code> 47	..... 59	
<code>\@edname</code> 47	<code>\@othm</code> 58	A
<code>\@email</code> 44	<code>\@parsename</code> 44	abstract (environ-
<code>\@firstauthor</code> ... 42	<code>\@partapp</code> 69	ment) ... 10 , 40
<code>\@firstsurname</code> .. 42	<code>\@post@hyperref</code> . 79	<code>\acks</code> 10 , 51
<code>\@getinitial</code> 44	<code>\@pre@hyperref</code> .. 77	<code>\addr</code> 9
<code>\@jmlr@apdimport</code> 92	<code>\@prefaceeditor</code> . 80	<code>\addtocpart</code> .. 27 , 97
<code>\@jmlr@authors</code> .. 50	<code>\@prefaceend</code> 80	<code>\addtomaincontents</code>
<code>\@jmlr@check@packages</code>	<code>\@prefacefile</code> ... 80	..... 91
..... 71	<code>\@prefacestart</code> .. 80	<code>\algocfconts</code> 55
<code>\@jmlr@import</code> ... 92	<code>\@productioneditorname</code>	algorithm (environ-
<code>\@jmlrabbrname</code> .. 46	..... 82	ment) 14 , 32 , 56
<code>\@jmlrabbrvproceedings</code>	<code>\@sbookpart</code> 70	algorithm2e (envi-
..... 36	<code>\@schapter</code> 66	ronment) ...
<code>\@jmlrauthors</code> ... 50	<code>\@seccntformat</code> .. 39	..... 15 , 32 , 56
<code>\@jmlrbegindoc</code> .. 90	<code>\@secondoffive</code> .. 90	algorithm2e package
<code>\@jmlrenddoc</code> 48	<code>\@setXref</code> 90	... 5 , 15 , 32 , 103
<code>\@jmlrissue</code> 49	<code>\@setimportlabel</code> 90	<code>\algorithmref</code> 18 , 53
<code>\@jmlrmaketitle</code> . 47	<code>\@shortauthor</code> ... 42	align (environ-
<code>\@jmlrpages</code> 50	<code>\@shorttitle</code> 41	ment) ... 19 , 20
<code>\@jmlrproceedings</code>	<code>\@subfigurelabel</code> 62	align* (environ-
..... 36	<code>\@subfloatcapbox</code> 62	ment) 19
<code>\@jmlrpublished</code> . 50	<code>\@subfloatcontsbox</code>	altdescription
<code>\@jmlrsubmitted</code> . 50	..... 62	(environ-
<code>\@jmlrvolume</code> 49	<code>\@subtablelabel</code> . 63	ment) ... 15 , 61

amsmath package ... [5, 19, 21](#)
amssymb package ... [5](#)
amsthm package ... [4, 57](#)
\AND ... [8](#)
\and ... [8](#)
\appendix ... [11, 28, 57](#)
\appendixref ... [17, 54](#)
\artappendix ... [56](#)
\artchapter ... [65](#)
article class ... [5, 37](#)
\articleauthorref ... [30, 81](#)
\articlepageref ... [30, 81](#)
\articlepagesref ... [30, 81](#)
\articletitleref ... [30, 81](#)
\artpart ... [69](#)
\arttableofcontents ... [68](#)
\Author ... [26, 87](#)
\author ... [8, 25, 41](#)
authorsignoff (environment) ... [26, 87](#)
auxhook package ... [91](#)
axiom (environment) ... [15, 60](#)
\axiomref ... [18, 54](#)

B

\backmatter ... [68](#)
\bf ... [72](#)
\bibliography ... [11](#)
\bibsection ... [103](#)
\BlackBox ... [57](#)
\bookappendix ... [70](#)
\bookchapter ... [65](#)
\booklinebreak ... [57, 83](#)
\bookpart ... [69](#)
\booktableofcontents ... [68](#)
\booktocpostamble ... [68](#)
\booktocpreamble ... [68](#)

C

\c@lamaketitle ... [84](#)

\c@subfigure ... [61](#)
\c@subtable ... [63](#)
\caption ... [14](#)
\chapter ... [27, 28, 65](#)
\chapterformat ... [66, 98](#)
\chaptermark ... [65, 101](#)
\chaptername ... [67](#)
\chapternumberformat ... [66, 97](#)
\chapterref ... [30, 80](#)
\chaptertitleformat ... [66, 98](#)
\citep ... [11](#)
\citet ... [11](#)

class options:

10pt ... [24](#)
11pt ... [24](#)
12pt ... [24](#)
7x10 ... [24, 74](#)
color ... [6, 24](#)
gray ... [6, 21, 24](#)
html ... [74](#)
letterpaper ... [24, 74](#)
nohtml ... [74](#)
nowcp ... [6, 23, 74](#)
onecolumn ... [6](#)
pdfxa ... [75](#)
tablecaption
bottom ... [6, 24](#)
top ... [6, 24](#)
tablecaptionbot-
tom ... [74](#)
tablecaptiontop ... [74](#)
twocolumn ... [6, 29](#)
wcp ... [6, 7, 23, 74](#)
color (option) ... [74](#)

combine class ...
... [4, 5, 31, 35, 37, 43, 65, 79, 88](#)
combnat package ... [5, 79](#)
conjecture (environment) ... [15, 60](#)
\conjectureref ... [18, 54](#)
\contentsname ... [87](#)
corollary (environment) ... [15, 60](#)
\corollaryref ... [18, 53](#)

D

\DeclareMathOperator ... [20](#)
\DeclareMathOperator* ... [20](#)
definition (environment) ... [15, 60](#)
\definitionref ... [18, 53](#)
description (environment) ... [15](#)
\doConvDate ... [77](#)
\doimportchapterHref ... [88](#)
draft (option) ... [35, 73](#)

E

\Editor ... [27, 34, 86](#)
\editor ... [7, 47](#)
\editorname ... [47](#)
\editors ... [8, 47](#)
\editorsname ... [47](#)
\Email ... [8, 46](#)
enumerate (environment) ... [14](#)
enumerate* (environment) ... [14, 60](#)
environments:
abstract ... [10, 40](#)
algorithm ...
... [14, 32, 56](#)
algorithm2e ...
... [15, 32, 56](#)
align ... [19, 20](#)
align* ... [19](#)
altdescription ...
... [15, 61](#)
authorsignoff ...
... [26, 87](#)
axiom ... [15, 60](#)
conjecture ... [15, 60](#)
corollary ... [15, 60](#)
definition ... [15, 60](#)
description ... [15](#)
enumerate ... [14](#)
enumerate* ... [14, 60](#)
equation ... [19, 32](#)
example ... [15, 60](#)
jmlrpapers ...
... [27, 28, 28, 29, 91](#)

keywords .. 10 , 40	<code>\HyRef@StarSetXRef</code> 89	<code>\jmlrmaketitle</code> .. 42
lemma 15 , 60		<code>\jmlrmaketitlehook</code> 43
preface	I	<code>\jmlrnowcp</code> 23
... 26 , 27 , 34 , 80	<code>\ifgrayscale</code> . 35 , 73	<code>\jmlrpapers</code> 50
proof 15 , 57	<code>\ifjmlrhtml</code> 36	jmlrpapers (environ- ment) 27 , 28 , 28 , 29 , 91
proposition 15 , 60	<code>\ifprint</code> 21 , 55	<code>\jmlrpostauthor</code> . 46
remark 15 , 60	<code>\iftablecaptiontop</code> 36	<code>\jmlrposttitle</code> .. 43
signoff	<code>\IfTitleElement</code> 31 , 83	<code>\jmlrpreauthor</code> .. 44
... 26 , 27 , 34 , 86	<code>\importarticle</code> 29 , 92 , 96	<code>\jmlrprehyperref</code> 4 , 35
split 20	<code>\importpaper</code> 29 , 29 , 92 , 94	<code>\jmlrpremaketitlehook</code> 43 , 92
table 6 , 24	<code>\importpubarticle</code> 30	<code>\jmlrprettitle</code> ... 43
theorem ... 15 , 60	<code>\importpubpaper</code> . .. 28 , 29 , 92 , 93 , 95	<code>\jmlrproceedings</code> 24 , 36
epsfig package 4 , 5	<code>\includegraphics</code> 12 , 20 , 25	<code>\jmlrpublished</code> 7 , 50
equation (environ- ment) ... 19 , 32	<code>\includeteximage</code> 13 , 55	<code>\jmlrsubmitted</code> 7 , 50
<code>\equationref</code> . 17 , 53	inputenc package ... 32	<code>\jmlrSuppressPackageChecks</code> 72
example (environ- ment) ... 15 , 60	<code>\InputIfFileExists</code> 91	<code>\jmlrtitlehook</code> .. 41
<code>\exempleref</code> .. 19 , 54	<code>\intertext</code> 20	<code>\jmlrvolume</code> . 6 , 49 , 95
	<code>\issue</code> 31	<code>\jmlrwcp</code> 23
F	<code>\it</code> 72	jmlrwcp2e package 4-6 , 8
<code>\figurecnts</code> 54	J	<code>\jmlrworkshop</code> 7 , 50 , 95
<code>\figureref</code> ... 18 , 53	<code>\jmlarticlecommands</code> 71	<code>\jmlryear</code> ... 6 , 50 , 95
final (option) . 35 , 74	jmlr2e package 4-6 , 8 , 35	K
fink package 5	<code>\jmlrabbrnamelist</code> 46	<code>\kernelmachines</code> . 47
<code>\firstpagefoot</code> . 101	<code>\jmlrauthorhook</code> . 42	keywords (environ- ment) ... 10 , 40
<code>\firstpagehead</code> . 101	<code>\jmlrauthors</code> 50	
<code>\firstpageno</code> . 48 , 98	jmlrbook package .. 32	L
<code>\floatcnts</code>	<code>\jmlrbook@info</code> .. 79	<code>\l@appendix</code> 67
.... 6 , 12 , 24 , 54	<code>\jmlrbookcommands</code> 71	<code>\l@chapter</code> ... 67 , 99
<code>\footfont</code> 101	<code>\jmlrbox</code> 43	<code>\l@chapterauthor</code> 100
<code>\footnoteseptext</code> 40	<code>\jmlrgrayscale</code> .. 75	<code>\l@papertitle</code> .. 100
<code>\frontmatter</code> . 26 , 67	<code>\jmlrhtmlmaketitle</code> 43	<code>\l@part</code> 99
G	<code>\jmlrimporthook</code> . 92	<code>\l@section</code> 100
<code>\gdef</code> 24	<code>\jmlrissue</code> ... 50 , 82	<code>\l@subsection</code> .. 101
geometry package 4 , 31 , 37	<code>\jmlrlength</code> 42	<code>\label</code> 14 , 17
<code>\getTZh</code> 77		lemma (environ- ment) ... 15 , 60
<code>\getTZm</code> 77		<code>\lemmaref</code> 18 , 53
<code>\global</code> 24		letterpaper (op- tion) 74
graphicx package . 5 , 12		
gray (option) 74		
H		
<code>\headfont</code> 101		
html (option) 74		
hyperref package 4 , 5 , 31 , 35 , 38 , 73 , 88		

<code>\logo</code>	25 , 82	package options:	preface (environ- ment)
M		10pt .....	... 26 , 27 , 34 , 80
<code>\mailto</code>	10 , 61 , 88	11pt	<code>\prefacename</code> .
<code>\mainauthorfont</code> .	86	12pt	26 , 80
<code>\maindatefont</code> ...	86	7x10	<code>\preparthook</code> .
<code>\mainissuefont</code> ..	85	color	70 , 98
<code>\mainlogofont</code> ...	85	draft	<code>\productioneditor</code>
<code>\mainmatter</code> ..	27 , 68	final .....	..... 25 , 82
<code>\mainproductioneditorfont</code>		gray	<code>\productioneditors</code>
.....	86	html .....	..... 82
<code>\mainsubtitlefont</code>		letterpaper ..	proof (environ- ment) ...
.....	85	nohtml	15 , 57
<code>\mainteamfont</code> ...	85	nowcp	proposition (envi- ronment) .
<code>\maintitle</code>	83	pdfxa	15 , 60
<code>\maintitlefont</code> ..	85	tablecaptionbottom	<code>\ps@article</code>
<code>\mainvolume</code> .	85	.....	102
<code>makejmlrbook</code>		tablecaptiontop	<code>\ps@articlet</code> ...
.....	5 , 33 , 80 , 92	.....	101
<code>makejmlrbookgui</code> .		wcp	<code>\ps@jmlrbook</code> ...
	4 , 5 , 23 , 25 , 26 ,	<code>\pagerule</code>	102
	28 , 32 , 33 , 74 , 92	<code>\paragraph</code> ...	<code>\ps@jmlrps</code>
<code>\maketitle</code> ..	7 , 25 , 43	<code>\part</code>	49
<code>\markleft</code>	102	<code>\partformat</code>	<code>\ps@jmlrtps</code>
<code>\morefrontmatter</code>	103	<code>\partnumberformat</code>	48
<code>\moremainmatter</code>	103	.....	psfig package
		..... 69 , 98	4
N		<code>\partref</code>	
<code>\Name</code>	8 , 45	<code>\parttitleformat</code>	R
<code>nameref</code> package	5	.....	remark (environ- ment) ...
<code>\nametag</code>	8 , 43	..... 69 , 98	... 15 , 60
<code>natbib</code> package	5 , 11 , 79	<code>\pdfcreationdate</code>	<code>\remarkref</code> ...
<code>\newcommand</code>	24	77	18 , 53
<code>\newenvironment</code> .	24	pdfpages package	<code>\renewcommand</code> ...
<code>\newtheorem</code> ..	16 , 58	4 , 31	24
<code>\newtheorem*</code>	16	pdfx package ...	<code>\renewenvironment</code>
<code>nohtml</code> (option) ...	74	75 , 77	..... 24
<code>\nowcp</code>	36	pdfxa (option)	<code>\reprint</code>
<code>nowcp</code> (option)	74	75	48
<code>ntheorem</code> package	4 , 57	pgf package	<code>\researchnote</code> ...
		55	51
O		<code>\postchapterskip</code>	<code>\rm</code>
<code>\objectref</code>	52	66	73
<code>\obsoletefontcs</code> .	72	<code>\postmainauthor</code> .	
<code>\operatorname</code> ...	20	86	S
<code>\operatorname*</code> ..	20	<code>\postmaindate</code> ...	<code>\sc</code>
		86	73
P		<code>\postmainissue</code> ..	<code>\section</code> ...
<code>\p@subfigure</code>	61	<code>\postmainlogo</code> ...	10 , 28 , 39
<code>\p@subtable</code>	63	85	<code>\section*</code>
		<code>\postmainproductioneditor</code>	10
		<code>\sectionref</code> ..
		..... 86	17 , 53
		<code>\postmainsubtitle</code>	<code>\set</code>
		.....	19 , 51
		<code>\postmainteam</code> ...	setspace package
		86	5
		<code>\postmaintitle</code> ..	<code>\SetTitleElement</code>
		85	..... 31 , 83
		<code>\postmainvolume</code> .	<code>\sf</code>
		85	73
		<code>\postparthook</code> 70 , 98	signoff (environ- ment)
		<code>\prechapterskip</code> .	... 26 , 27 , 34 , 86
		66	siunitx package
			24
			split (environ- ment)
			20
			<code>\startpage</code>
			48
			<code>\subfig</code>
			61

subfig package	\text	20	\tocchapterpubauthor
..... 4 , 13 , 31 , 61	\thanks	40	..... 99
\subfigref ... 18 , 62	\theHalgocf	88	\toclevel@appendix
\subfigure ... 13 , 62	\theHalgorithm ..	88	..... 88
\subfigurelabel . 62	\theHfigure	88	\tocpart
\subparagraph 28 , 39	\theHfootnote ...	88	73
\subsection 10 , 28 , 39	\theHsection	88	\twocolumn
\subsection* 10	\theHsubfigure ..	88	29
\subsubsection ..	\theHtable	88	
..... 11 , 28 , 39	\thejmlrworkshop	82	U
\subsubsection* . 11	theorem (environ-		\url
\subtable 14 , 64	ment) ... 15 , 60		url package
\subtablelabel .. 64	theorem package .	4 , 57	5
\subtabref ... 18 , 63	\theorembodyfont		V
\subtitle 25 , 82	..... 16 , 57		\vec
\sum	\theoremheaderfont		60
	..... 16 , 57		\volume
T	\theoremmref	53	25 , 82
\TeXpageref	\theoremposheader		W
\TeXref .....	..... 16 , 58		\wcp
table (environ-	\theoremref	18	wcp (option)
ment) 6 , 24	\theoremsep ..	16 , 57	36
tablecaptionbottom	\thesubfigure ...	61	74
(option) 74	\thesubtable	63	X
tablecaptiontop	tikz package	13	xcolor package ...
(option) 74	\title	7 , 24 , 41	5 , 21
\tablecnts	\titlebody ...	30 , 83	xkeyval package
\tableofcontents 27	\titlebreak ...	7 , 41	..... 5 , 35 , 73
\tableref 17 , 53	\titletag	7 , 41	\Xlabel
tabularx package 4	\tocchapterauthor		90
\team .....	..... 98		\Xpageref
TeX4ht			89
			\Xprefix
			88
			\Xref
			89
			Z
			\zeroextracounters
			..... 87